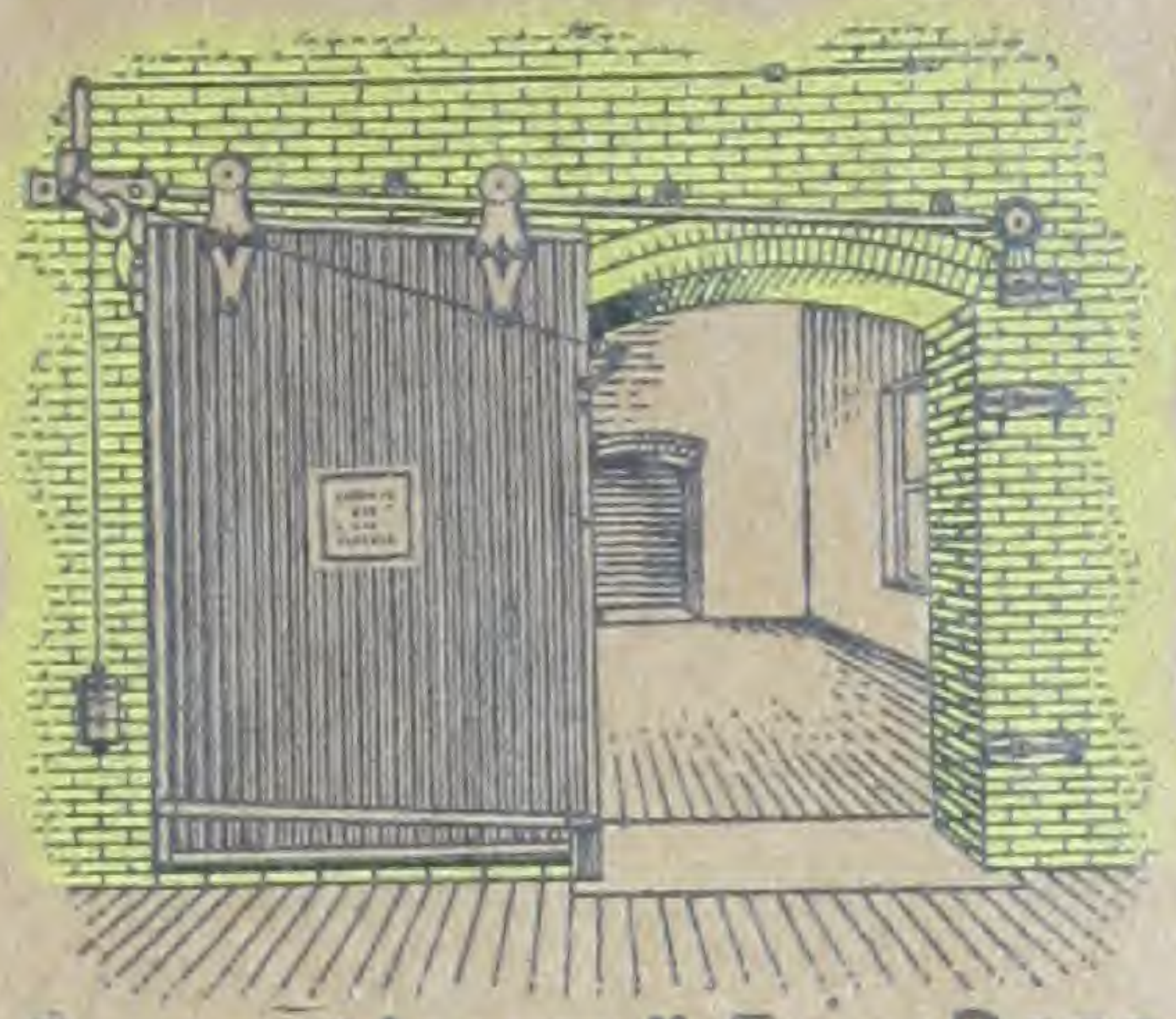


5-30-1

EVANS "ALMETL" FIRE DOORS & SHUTTERS AND THE FAMOUS "STAR" VENTILATORS



EVANS "ALMETL" FIRE DOOR

CHARLES
L. HARRIS
LITHO

POWELL EVANS, PRESIDENT.

MERCHANT & EVANS Co

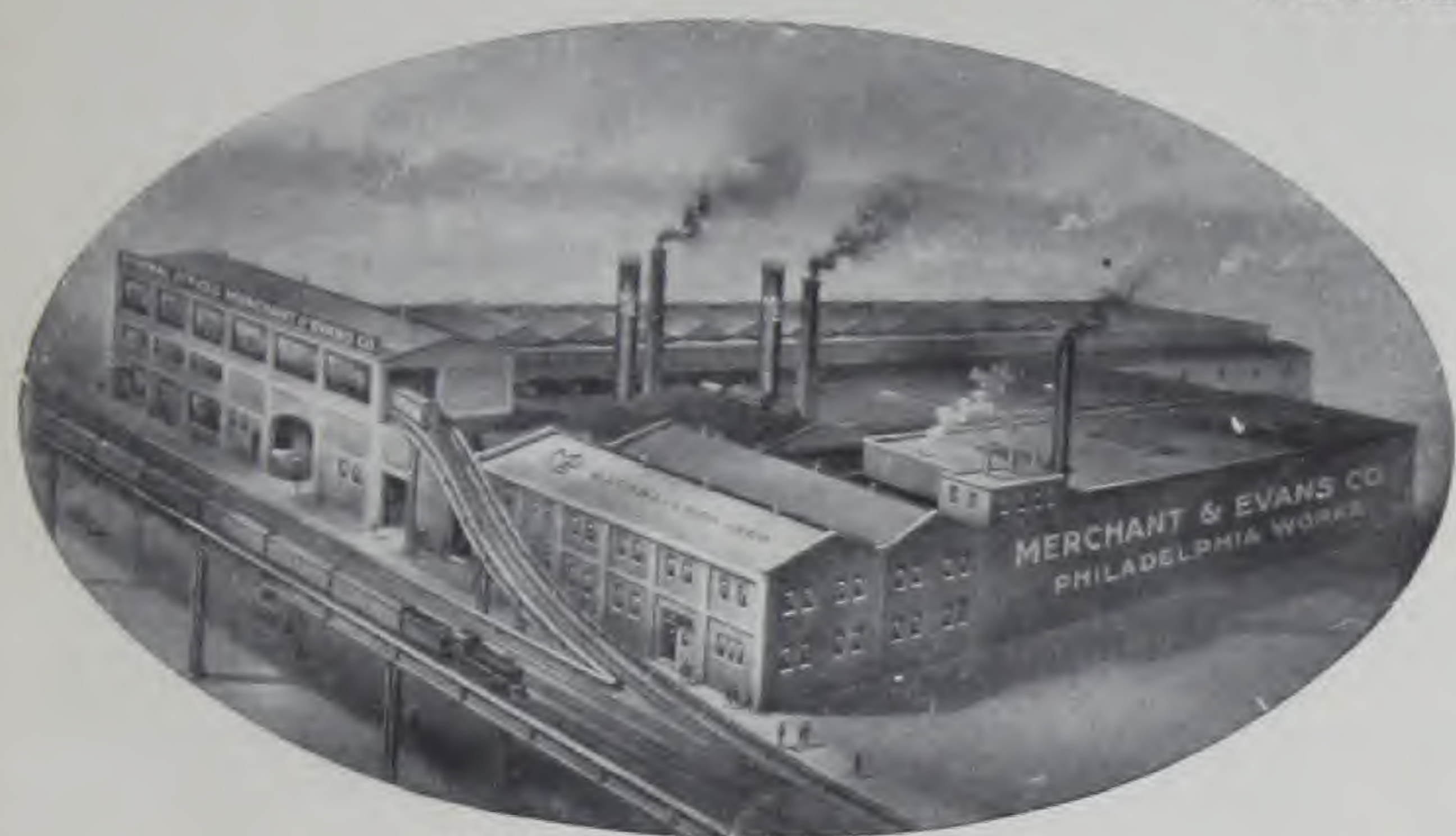
NEW YORK PHILADELPHIA WHEELING
BALTIMORE ATLANTA CHICAGO
CLEVELAND ST. LOUIS
KANSAS CITY





EVANS "ALMETL" FIRE DOORS AND SHUTTERS

(PAT. PENDING)



OUR PHILADELPHIA PLANT

Form an impassable fire barrier.
Constructed of steel and asbestos.
Rigid, non-warping and indestructible.
No wood to rot; no tin to rust.

THE WORLD'S STANDARD

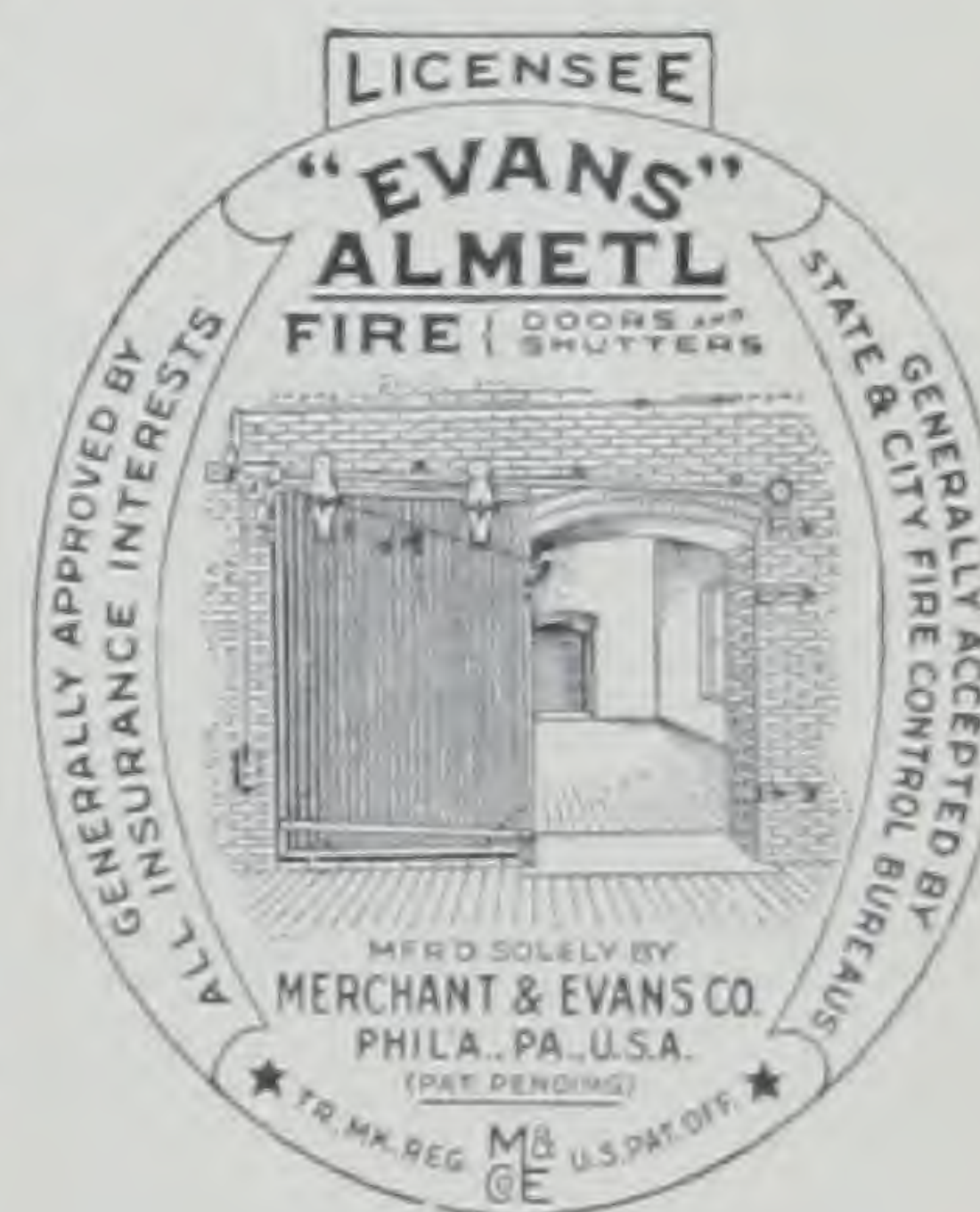
Fully approved by Underwriters' Laboratories, Chicago, and Factory Mutual Laboratories, Boston, State and Municipal Officials everywhere, and approved and used by the U. S. Government in many important buildings.

SERVICE AND FACILITIES

We have a large number of thoroughly experienced contracting and erecting Licensees established in all parts of the country. Herewith is an illustration of the cut used by our Licensees on their stationery. It is your assurance that they have been selected by us as fully competent to care for the erection of our Evans "Almetl" Fire Doors, and Evans "Almetl" Fire Shutters, to accord with all Underwriters' requirements.

Look for this cut on their Stationery

If you are not in touch with any of our Licensees, please write to our nearest office and you will be promptly furnished with full and complete information, and arrangements made for estimating on your requirements.



MERCHANT & EVANS Co

NEW YORK

PHILADELPHIA

WHEELING

BALTIMORE

CHICAGO

ATLANTA

ST. LOUIS

CLEVELAND

KANSAS CITY

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BY

MERCHANT & EVANS CO., PHILA.



EVERYTHING IN METALS



The Importance of Fire Doors and Shutters

is indicated by the fact that **one-third** of all fire insurance charges in cities are for exposure hazards.

Yet despite this warning, despite the evidence of every big fire that the risk is reduced to a minimum by the installation of proper doors and shutters, there was no well made, well designed **metal covering** for unprotected openings that met the Fire Hazard adequately, until we originated the Evans "Almetl" Fire Doors and Shutters.

Approved by Underwriters' Laboratories and by officials everywhere because of their proven superiority, Evans "Almetl" Doors and Shutters have other great advantages. They are capable of economic and systematic shop production, they are **adaptable to all conditions** in plants of every character, and **they are lowest in maintenance cost.**

Through our Branches and numerous experienced contracting and erecting Licensees, distributed throughout the United States, we are able to give a service to architects, builders, and owners of properties, that solves the problem of the unprotected or improperly protected opening.

Most Fires are Preventable and Controllable

One of the principal remedies is to install fire doors to protect exposed openings in Division Walls or Fire Walls, of either old or new buildings.

An approved installation of Evans "Almetl" Fire Doors will reduce the annual insurance rate on property.

The Regulations of the National Board of Fire Underwriters, for the protection of openings in walls and partitions against fire, specifically state that:

The great importance of Fire Walls as a safeguard to life and in preventing the spread of fire, and the fact that they are liable to be severely exposed to fire for considerable periods, makes it essential that all openings in such walls be protected by the most efficient methods."

The Evans "Almetl" Fire Door is of rigid, all-steel, indestructible construction. No tin to rust, no wood to rot, no thin covering to bruise; it has been given the very highest Standard Class A Grade Approval issued by the Underwriters' Laboratories, Inc., of Chicago, and is fully approved by the Factory Mutual (Boston) Laboratories. It has been proved by experience and actual tests to be the **best Fire Door on the market.**

Thousands of wood-core tin-clad fire doors have been replaced because of the effect of dry rot. Why pay double? The Evans "Almetl" Fire Door will last indefinitely and requires no repairs or expense to maintain.

You can avoid unnecessary charges for fire hazard by installing the Evans "Almetl" Fire Doors or Shutters.

MERCHANT & EVANS COMPANY,
POWELL EVANS, PRESIDENT.



To Architects, Contractors, Property Owners and State and City Police and Safety Departments



Evans "Almetl" Fire Doors, after a series of rigid tests, were placed in the very highest Standard Class A grade (both Fire and Accident), by the Underwriters' Laboratories, Chicago, Ill., and have received the very best approval from the Factory Mutual Laboratories, Boston. We strongly recommend that you specify these doors wherever maximum reduction in insurance rates is desired, lowest maintenance costs and the highest degree of protection to both life and property.

Those foremost in fire protection and prevention affairs throughout the country have recognized the superiority of our doors, as we have received over two hundred approvals from National, State and Municipal officials. A duplicate copy of one of these approvals is shown in cut.

Unlike other types of doors that are made by hundreds of concerns in a multitude of places and under all sorts of conditions, the Evans "Almetl" Doors are built in one central factory, and constantly supervised by the Underwriters' Laboratories Inspectors. Modern high-powered machinery and the most skillful labor obtainable is employed to produce absolute uniformity of construction.

It is claimed that standard tin-clad fire doors must contain at least 10% of moisture in their wood core to be unaffected by dry rot, but it is to be further noted that when the wood core contains more than 10% of moisture the intense heat from a fire will generate gases that can exert sufficient pressure on the seams or joints of the tin to burst them apart, whereas the "Almetl" Doors are so well and strongly made that they should last indefinitely and without any repairs.

Our doors will eventually pay for themselves in the insurance reduction allowed for their installation, and the practical absence of any maintenance charges. They are unquestionably the latest and very best building opening coverings on the market, and afford a maximum degree of protection against both fire and accident. They also cost less to install than the standard tin-clad doors.

The Evans "Almetl" Fire Shutters have received the highest approvals from the Underwriters' Laboratories, Chicago, and from the Factory Mutual Laboratories, Boston, and wherever Fire Shutters are needed you can unhesitatingly specify them as suitable for the most exacting conditions.

Please note carefully that approval by the Underwriters' Laboratories covers Stock Insurance only, whereas we also have Mutual Insurance approval through the Factory Mutual Laboratories of Boston.

In addition to our approvals from the Chicago and Boston Laboratories, we have over two hundred approvals from prominent officials directly interested in fire protection and prevention affairs, thus constituting a far greater number and a better class of approvals than extended to the manufacturers of any other fire doors on the market.

SPECIFICATIONS

We suggest that you adopt the following specifications:

"Furnish and install all Fire Doors and Fire Shutters where shown or indicated on plans.

Doors or Shutters to be the Evans "Almetl" type, manufactured by Merchant & Evans Company, Phila., Pa., to be automatic self closing in case of fire. Door to be made of two thicknesses of No. 24 gauge $2\frac{1}{2}$ " corrugated galvanized steel, interlined with asbestos roll board in a continuous rigid frame of $2\frac{1}{2}$ " x $\frac{3}{16}$ " bar steel, (Frames of Doors for openings over 50 square feet in area to be made of $2\frac{1}{2}$ " x $\frac{1}{4}$ " bar steel) bound in No. 22 gauge galvanized steel cover, tightly riveted to frame. Proper provision is to be made for expansion and contraction without distorting the frame, and where necessary on account of size reinforcing rods securely fastened are to be provided and to extend the entire width of Door.

All Doors to be equipped with approved Hardware, each Door shall bear the label of the Underwriters' Laboratories and also that of the manufacturer. Factory Mutual Laboratories' symbol of approval shall appear on the Doors, when required for buildings where insurance risks are carried by the Factory Mutual Companies. All automatic self closing devices to be in strict accordance with the requirements of the Fire Underwriters having jurisdiction.



GENERAL DESCRIPTION

EVANS "ALMETL" FIRE DOORS

(PAT. PENDING)



Note the construction as shown by adjoining illustration; a double panel of heavy corrugated galvanized steel, lined with the best grade of sheet asbestos and bound in a rigid, continuous frame of $3/16"$ x $2\frac{1}{2}"$ bar steel.

This frame is reinforced on all edges by an extra heavy binder of galvanized steel, thus forming a box for the panel and preventing the damage that always occurs to fire doors of other types.

There is ample provision for expansion and contraction so that any distortion or warping of the door is impossible. The construction provides a series of regular air spaces, properly insulated and covering the entire area of the door. This reduces radiation of heat to a minimum.

The cross-laid corrugated sheets, rigidly attached to the reinforced frame, makes the Evans "Almetl" Door by far the best and strongest on the market; while the absence of any wood core makes it considerably lighter in weight than the standard three-ply tin-clad fire door.

The Evans "Almetl" Fire Door is of attractive appearance, and when painted to harmonize with its surroundings it is a far better looking door than any other

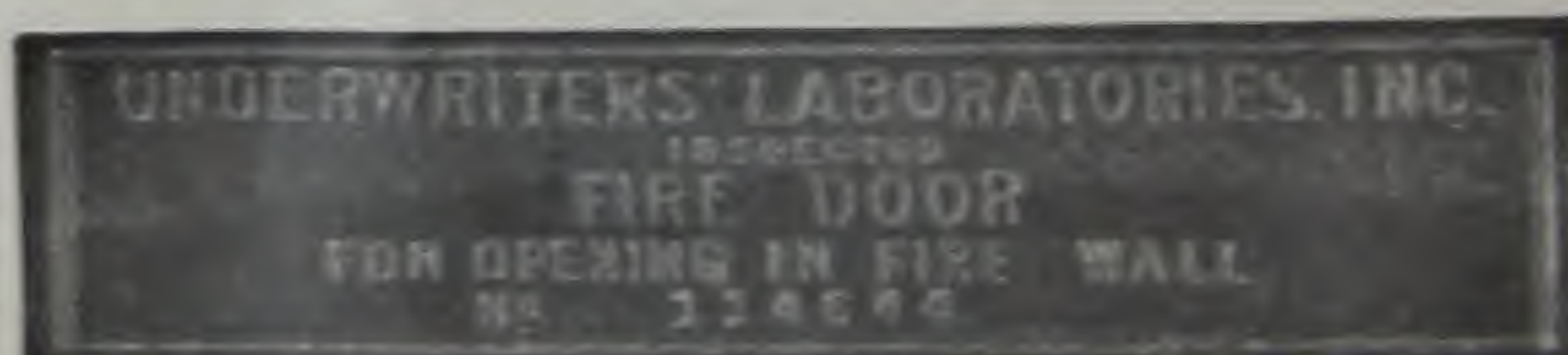
type that could be used for the same purpose and under like conditions. There is nothing to bulge and become unsightly, as with tin-clad wooden doors.

It is also very durable and does not require repairs even when installed in large warehouses where there is constant hauling of trucks through openings or doorways. On the other hand, the accidental impact of trucks against tin-clad doors has always resulted in damage to the thin tin covering of the wood core doors and frequently results in punctures that must be immediately repaired if the door is to act as an efficient fire stop.

Under actual tests our Evans "Almetl" Fire Door has successfully withstood the intense heat of a fire of 2000 degrees Fahrenheit.

FACTS ABOUT EVANS "ALMETL" FIRE DOORS

1. Evans "Almetl" Fire Doors average in weight not more than five pounds per square foot and therefore weigh much less than standard three-ply wood core tin-clad fire doors.
2. There are no maintenance charges to be considered, as they contain no wood or other material subject to deterioration.
3. The structural details are always in full view.
4. They are designed to withstand intense heat for long periods of time, and yet radiate it to only a slight degree.
5. The rigid construction offers maximum resistance to any sudden lowering of temperature, or impact force from application of high pressure fire streams.
6. The Evans "Almetl" Fire Doors are of more attractive appearance than tin-clad fire doors and positively much more durable.
7. The improved design of the "Almetl" Door has reduced the radiation of heat and passage of flames to a minimum.
8. Evans "Almetl" Fire Doors can be used with any style of Underwriters' Approved Fire Door Hardware, and with any type of operating device used for solid panel freight or pier shed doors. It is necessary, however, that we furnish a few special fixtures with all our doors, owing to their original and improved design.
9. In addition to the numerous air passages formed by the cross-laid corrugated steel panels, there is a lining between these panels of asbestos roll board, extending the full size of the door.
10. The heavy reinforcing steel binder on the edges prevents damage to frame from trucking.
11. Evans "Almetl" Fire Doors can be fitted with metal trim to match interior decorative effects.
12. We can readily supply our doors with wired glass panels, or with wicket gates, or recessed at top for mono-rail or overhead trolley track.



Fac-simile of Underwriters' Label placed on Evans "Almetl" Fire Doors

Necessary data to be furnished us when you ask for quotations or send orders for Evans "Almetl" Fire Doors

A. The precise style of door, whether sliding or swinging, etc., must be clearly mentioned; also whether top of door is to be square, inclined or arched.

B. It must be distinctly stated whether doors are single or double and whether wanted for both sides of an opening or one side only. If both sides, mention whether the fixtures can be bolted together.

C. The direction of motion of doors, whether right or left, must be distinctly given, **as doors are not reversible.**

D. A precise statement as to the sort of hardware desired, whether wrought or malleable, is necessary.

E. Each inquiry or order must state:

1. Number of openings, and number of doors required for same.
2. Whether openings are square or arched top.
3. Height of center of opening.
4. Height of side of opening.
5. Width of opening.
6. Thickness of walls.
7. Distance from highest point of opening to nearest obstruction overhead. **Note.** Square top openings should have 14" headroom at edge of opening, and $\frac{3}{4}$ of an inch more for each foot of track beyond that point. Arched top openings should have 14" headroom above top of the arch, and $\frac{3}{4}$ of an inch more for each foot the track extends beyond the center. Always state nature and location of any obstructions above top of opening, or on side walls.
8. Distance from edge of openings to wall at right angles, if any, to provide sufficient space for wall binders.

F. Mention kind of sill, and if raised, the height of same from the floor.

G. For swinging doors, state if they are to overlap the openings. If not, and they are to fit flush with the wall, always mention whether the opening (or frame, if used) is of the rabbeted type, and give depth and width of rabbet.

H. If channel irons or steel door frames are used, state width of same on wall side.

I. If doors are to be enclosed in pockets, 4" clearance room must be provided for sliding of doors and hardware.

J. State whether walls are concrete, brick, or stone, etc.

K. If **unapproved** steel lintels are employed, state height of same, as doors must overlap masonry work 4" above upper edge of lintel.

L. If hinge pins or eye blocks are already set for swinging doors, give diameter of same; also distance from center of pin to face of wall, and distance from center of pin to edge of opening.

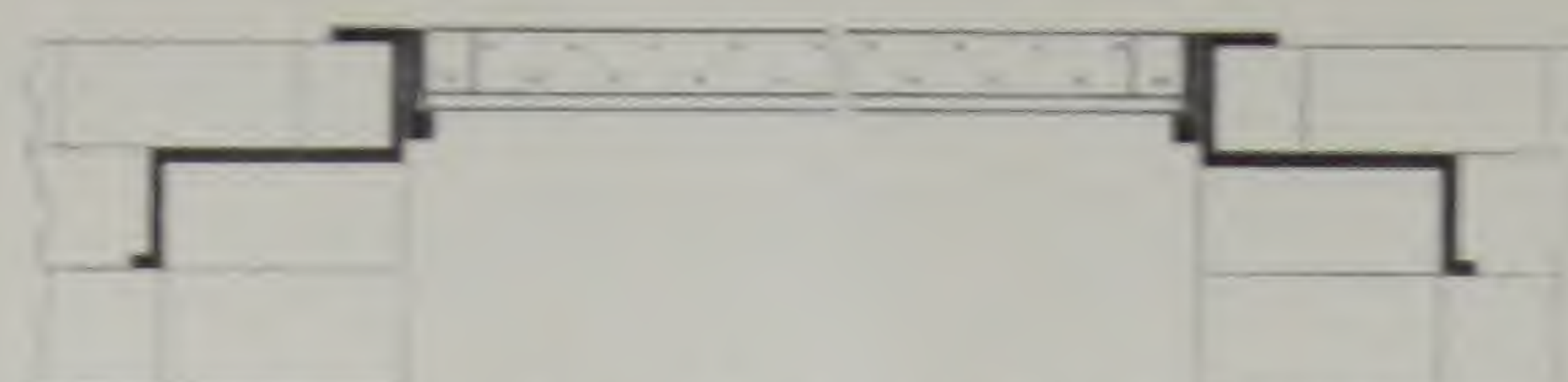
M. For openings having scant headroom, either straight or drop bracket type hardware must be used, at special prices.

N. For vertical sliding doors, furnish necessary data from above information and give particular consideration to headroom above opening, and wall room on each side of opening.

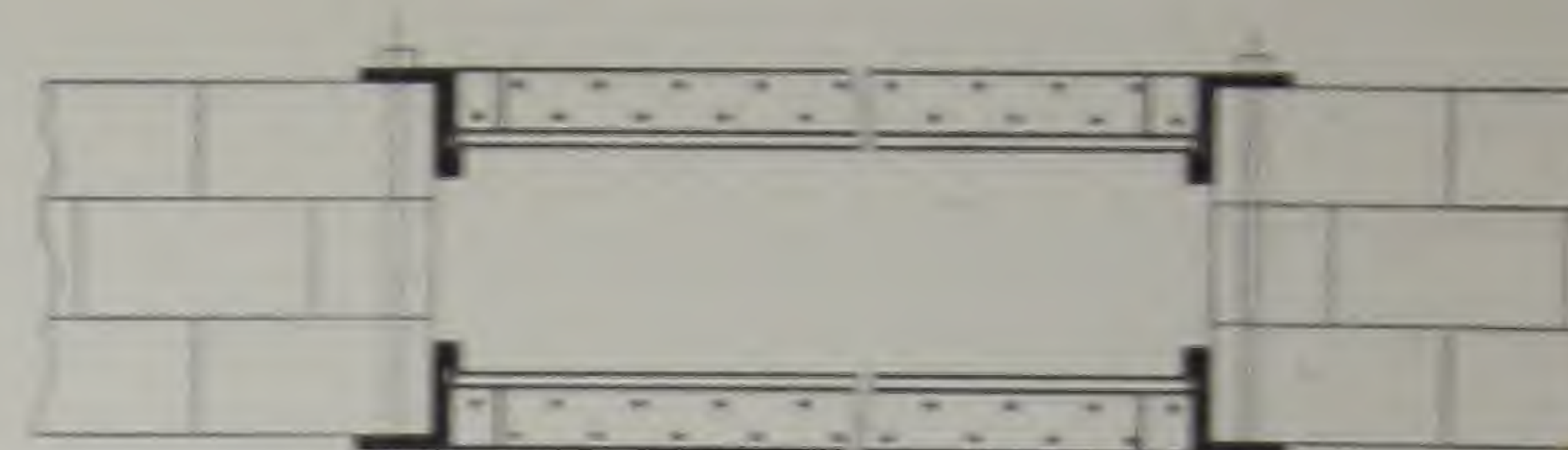
O. A precise statement as to what insurance jurisdiction is concerned (whether Stock or Mutual and name) must be marked on each order.



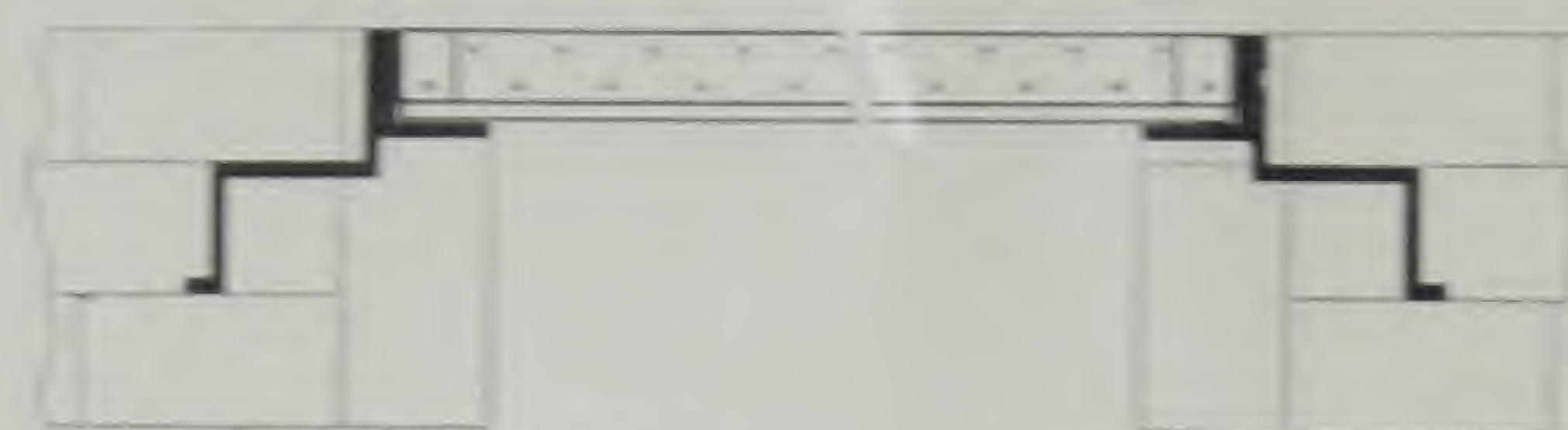
Fac-simile of Factory Label used on all Evans
"Almetl" Fire Doors — your protection on
dependable manufacture



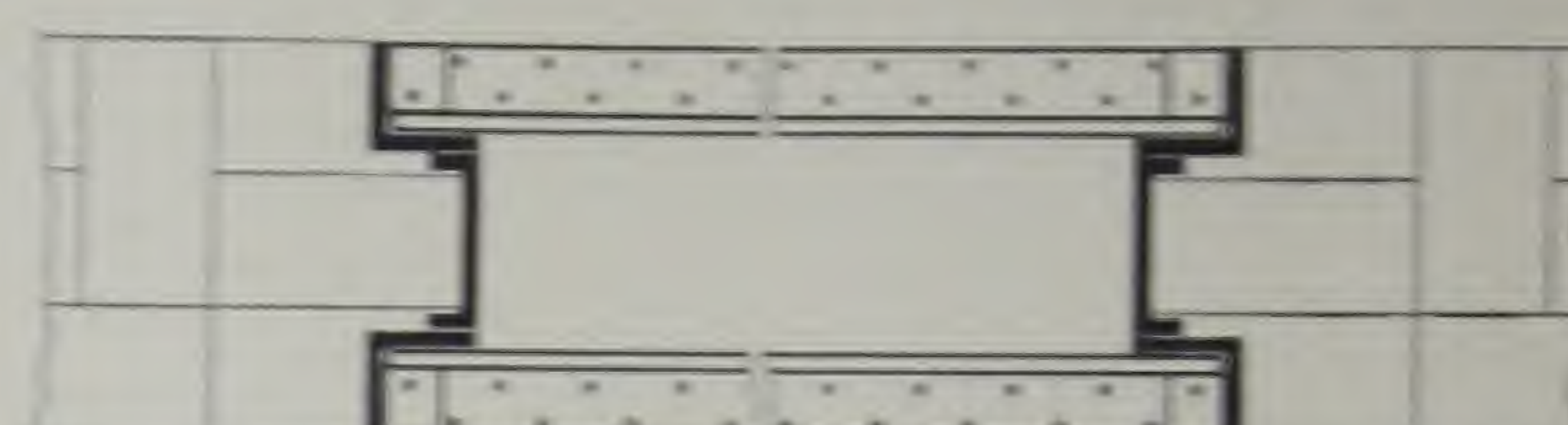
FLUSH DOOR FOR ONE SIDE OF OPENING—
NOT RABBETED FRAME



FLUSH DOORS FOR BOTH SIDES OF OPENING
—NOT RABBETED FRAME



Flush Door for ONE side of opening. Rabbeted Frame.



Flush Doors for BOTH sides of opening. Rabbeted Frame.

Types of Evans "Almetl" Fire Doors

Single Sliding, Right-Hand or Left-Hand.
Double Sliding.
Single Swinging, Right-Hand or Left-Hand, Overlap.
Single Swinging, Right-Hand or Left-Hand, Flush (for Rabbeted opening).
Single Swinging, Right-Hand or Left-Hand, Flush (not for Rabbeted opening).
Double Swinging, Overlap.
Double Swinging, Flush (for Rabbeted opening).
Double Swinging, Flush (not for Rabbeted opening).
Vertical Sliding.
Horizontal Lifting.
Wired Glass Panel Doors.
Recessed Doors, for Mono-rail or Overhead Trolley.
Irregular Shaped or Special Doors.

Sliding Doors, either Single or Double style, are made with Inclined Top, or straight (level) top, or arched top, as may be required; and Swinging Doors—either single or double—can be made with level top or arched top, as desired. Arched tops are special.

Note.—We furnish two-link fixtures, with all Single Sliding or Single Swinging Doors; and three-link fixtures with all Double Sliding or Double Swinging Doors, excepting Level Track and Special Level Drop Bracket Hardware, with which one Fusible Link only is supplied. Horizontal Lifting Hardware is supplied with four Fusible Links.

When doors are to be used on both sides of the wall (or opening) double sets of hardware will be required, and the price will accordingly be doubled.

Wall Bolts are never included with any hardware, unless specially ordered, and Counter-balance Weights are not included with Vertical Sliding Door Hardware, unless so ordered.

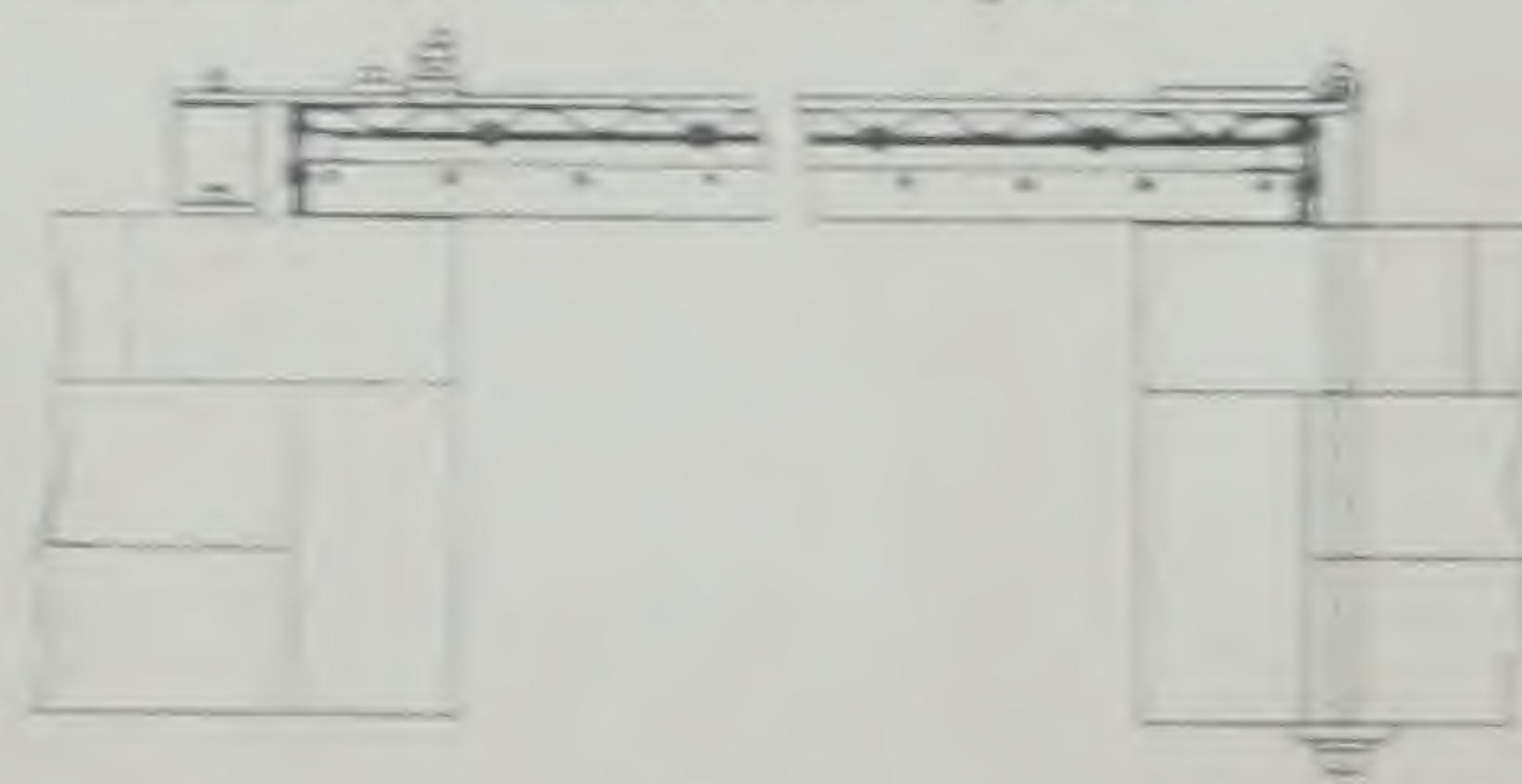
It is sometimes necessary to conceal Fire Doors in a "Pocket" when used to protect Elevator Shafts and Corridors. In such cases our door, after being hung on the fire wall, is screened by a tile or curtain wall, which is held in place by steel bucks. The fire wall opening is framed with channel iron and front edge of door can be covered with art metal to match finish of jamb. Very complete details are needed for this installation and provision must be made for clearance room.

Types of Hardware for Evans "Almetl" Fire Doors

Single Sliding Round Track (Malleable) or Flat Track (Wrought).
Double Sliding, Round Track (Malleable) or Flat Track (Wrought).
Single Sliding, Level Track (Malleable or Wrought).
Single Sliding, Special Level Drop Bracket Track (Wrought) or Reversed Level (Malleable).
Vertical Sliding, Round Track or Flat Track.
Horizontal Lifting, Round Track.
Single Swinging (Wrought or Malleable).
Double Swinging (Wrought or Malleable).
Non-Automatic (Furnished to order).

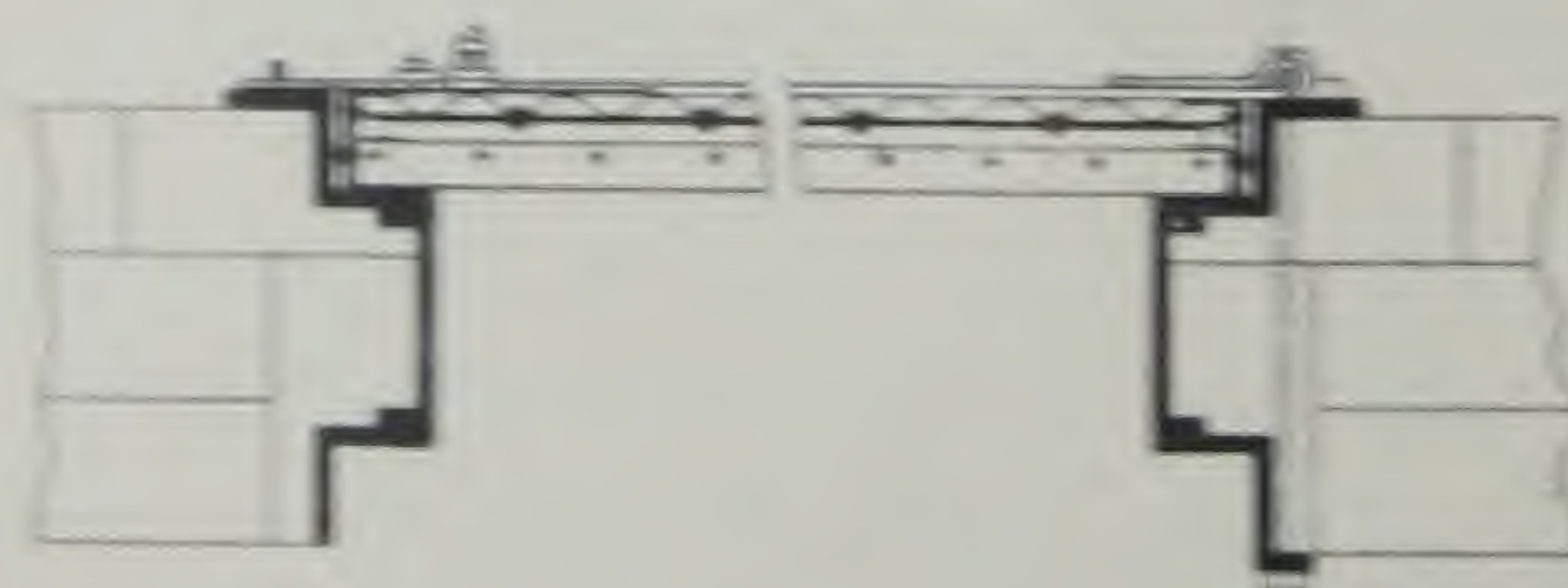
Information About Swinging Doors

There is so much misunderstanding about Swinging Doors that the following information is given to clearly indicate the different styles:



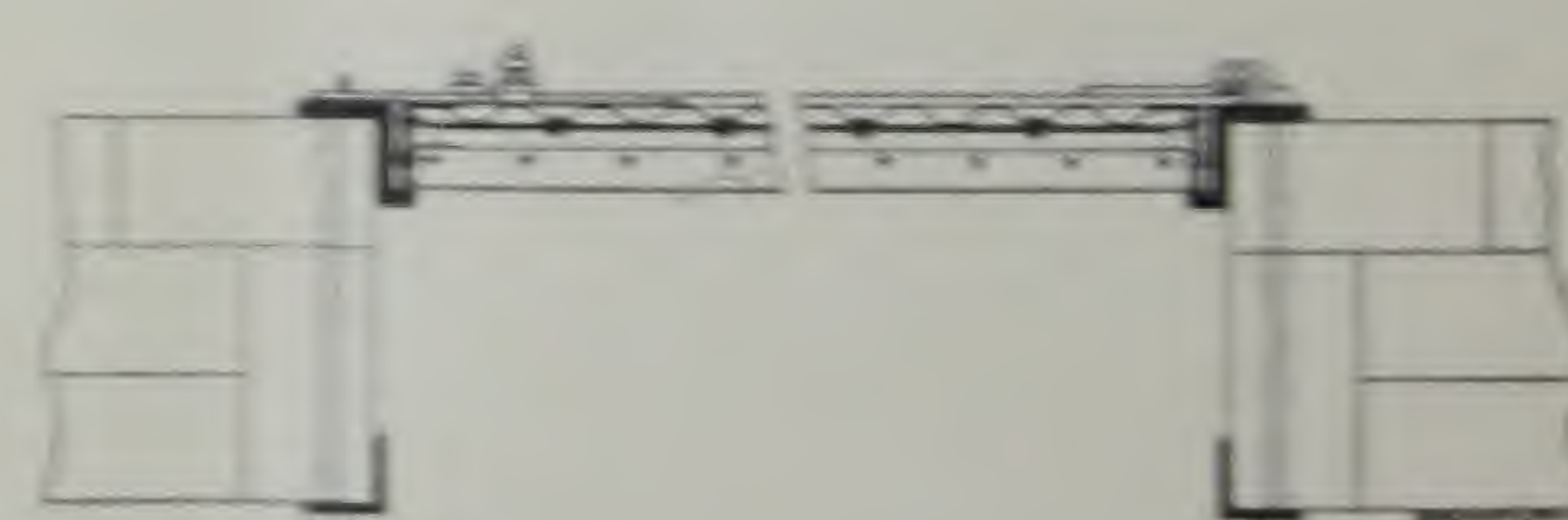
Plan of Overlap Door.

This type of door overlaps the opening 4 inches on each side and 4 inches at top, but if Listels are not of "approved" type the overlap at top must be 4 inches above the upper edge of the flange.



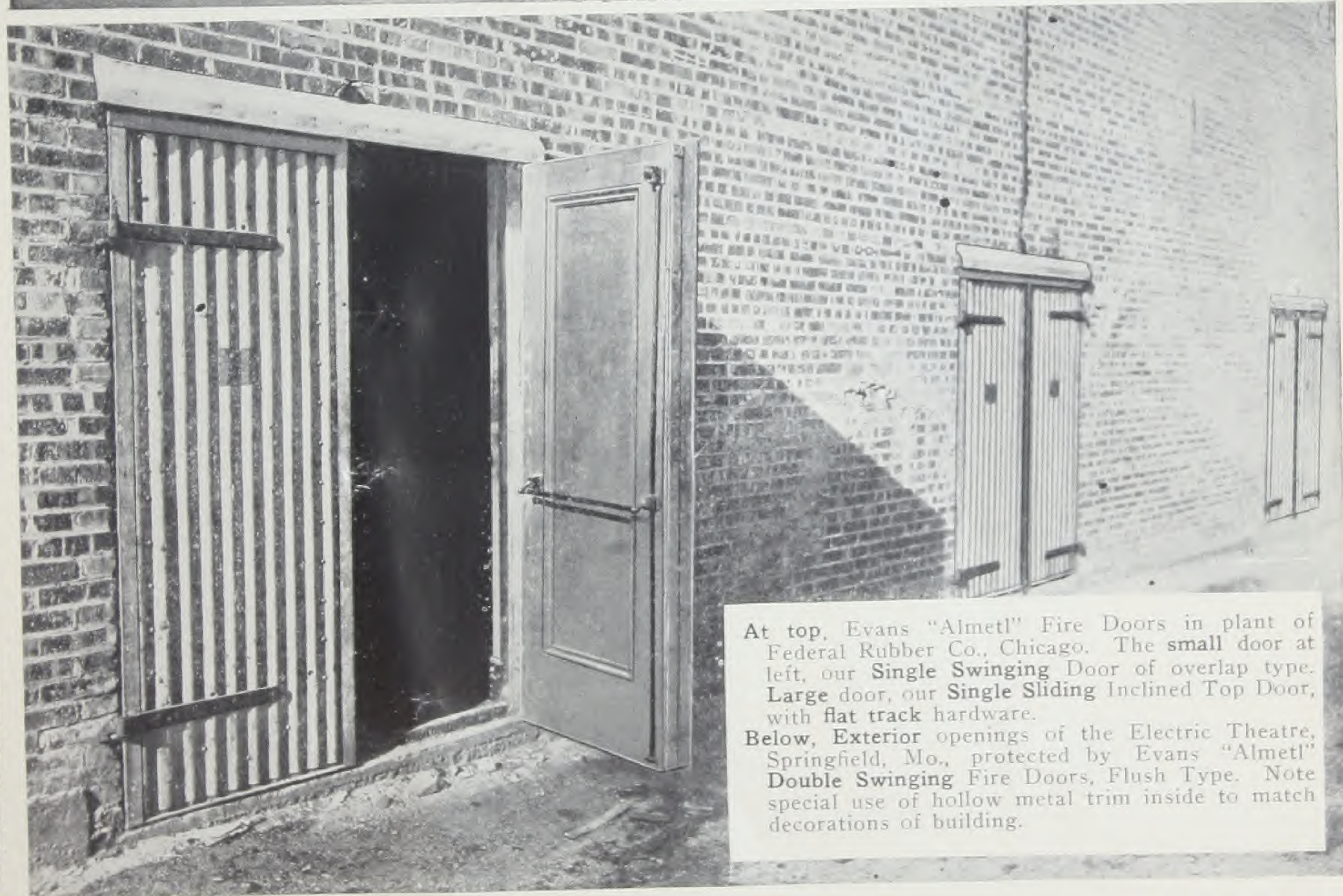
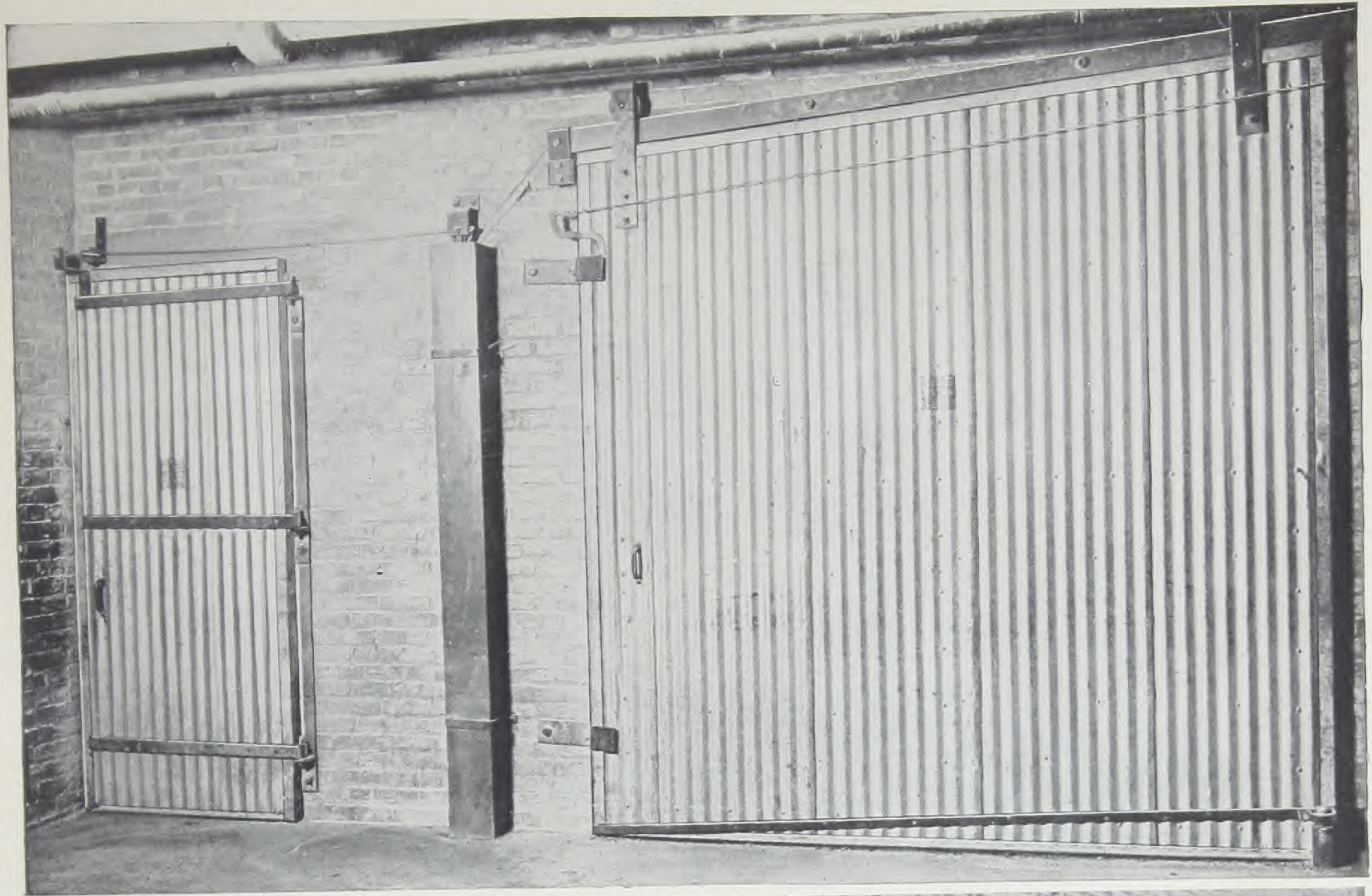
Plan of Flush Door, with Angle Iron Frame,
Rabbeted Type

This type of door overlaps the mean dimensions of wall openings 4 inches on both sides and at top. When manufacturing the door we make sufficient allowance to prevent it from fitting too tightly.



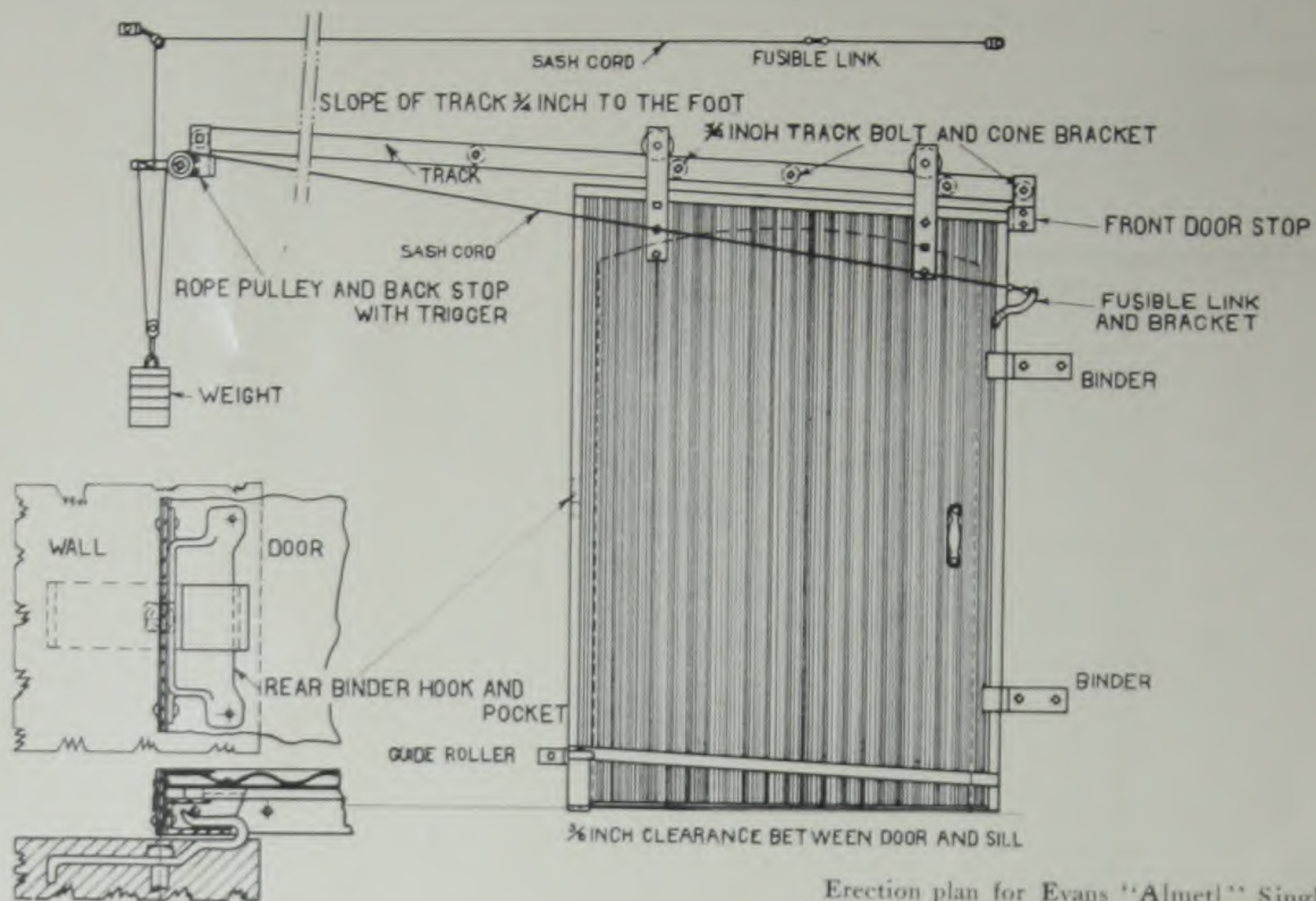
Plan of Flush Door, with Angle Iron Frame
for Face of Wall.

This type of door is relatively the same size as opening, but must be measured between faces of Angle Iron Frame (if used). When manufacturing the door we make sufficient allowance to prevent it from fitting too tightly.

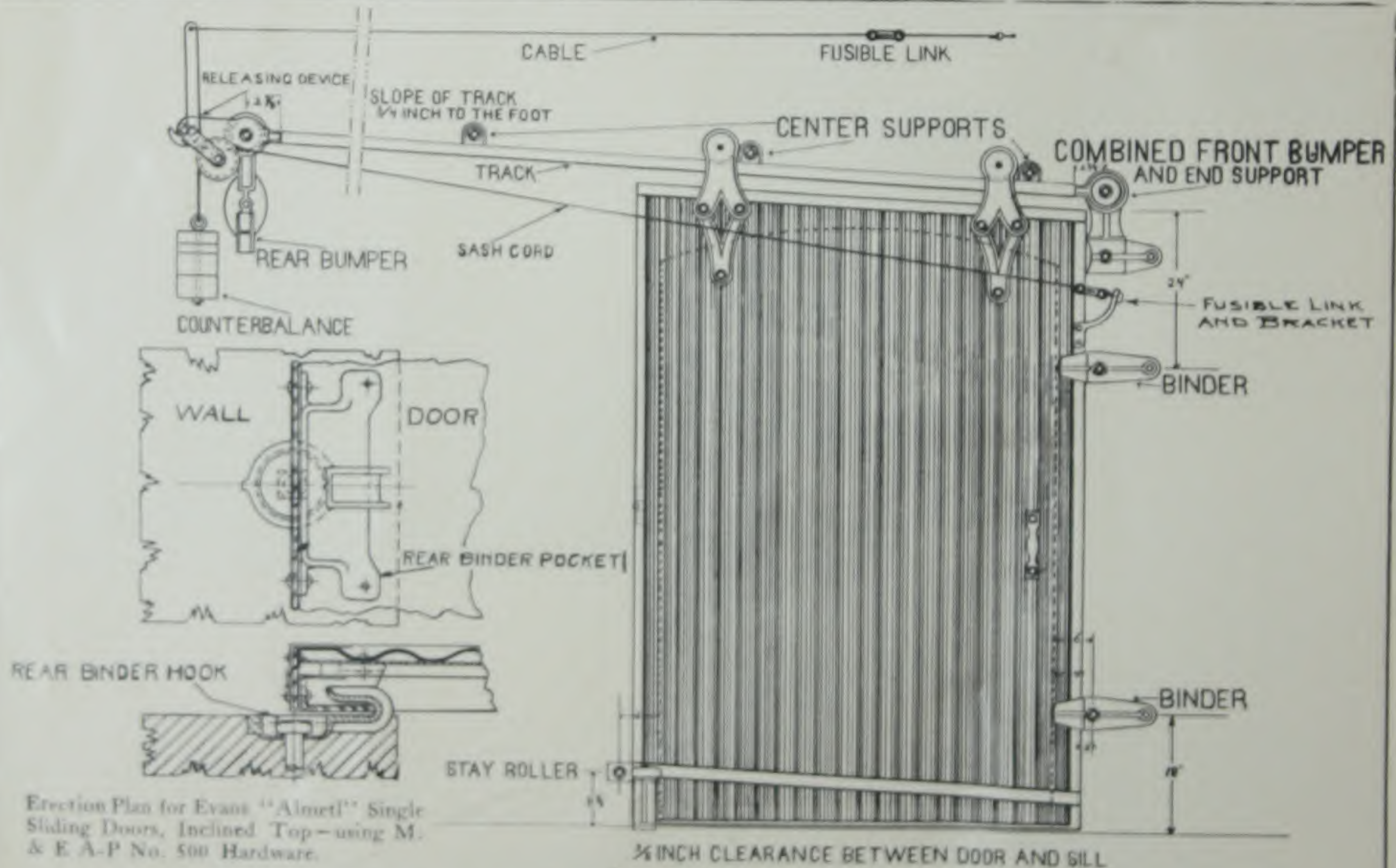


At top, Evans "Almet" Fire Doors in plant of Federal Rubber Co., Chicago. The small door at left, our **Single Swinging Door** of overlap type. Large door, our **Single Sliding Inclined Top Door**, with flat track hardware.

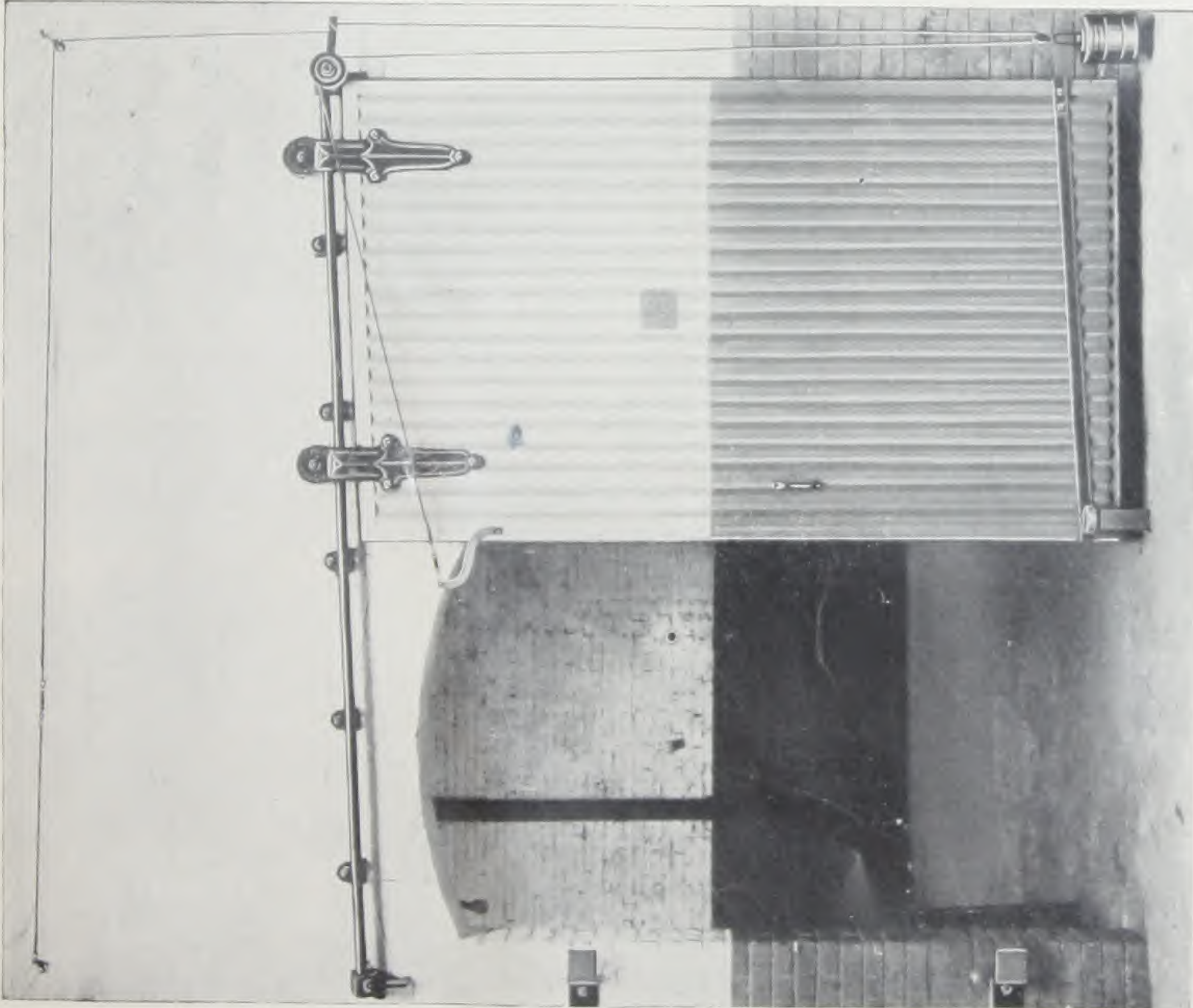
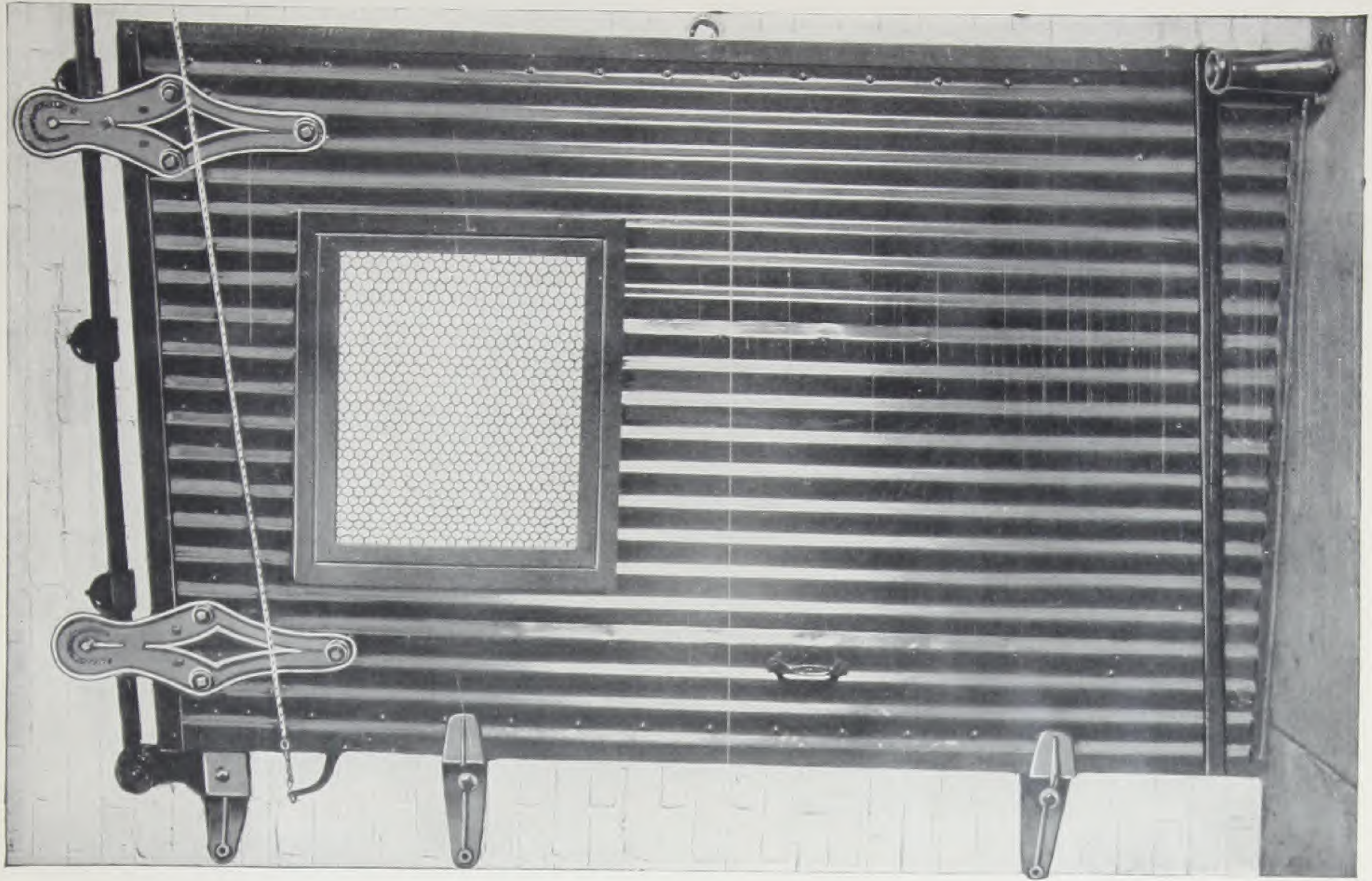
Below, Exterior openings of the Electric Theatre, Springfield, Mo., protected by Evans "Almet" **Double Swinging Fire Doors, Flush Type**. Note special use of hollow metal trim inside to match decorations of building.



Erection plan for Evans "Almet" Single Sliding Fire Doors, Inclined Top—using M. & E. R-W. No. 102 Hardware.



Erection Plan for Evans "Almet" Single Sliding Doors, Inclined Top—using M. & E. A-P No. 500 Hardware.



Above, Evans "Almet" Single Sliding Fire Door, inclined top, in our Philadelphia plant. Round track, 2-link hardware.

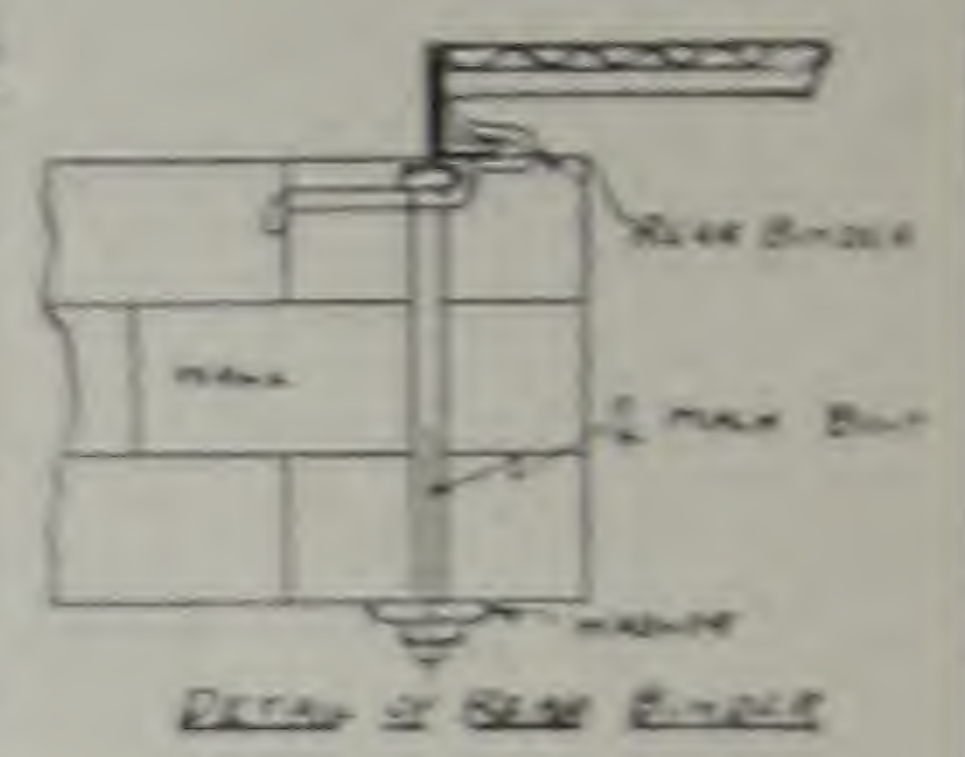
At right, Evans "Almet" Single Sliding Fire Door, with polished, wired glass panel. (Now approved and labeled.) Round track hardware.

NOTE.—Evans "Almet" Doors are rigid in plane, and indestructible in use.

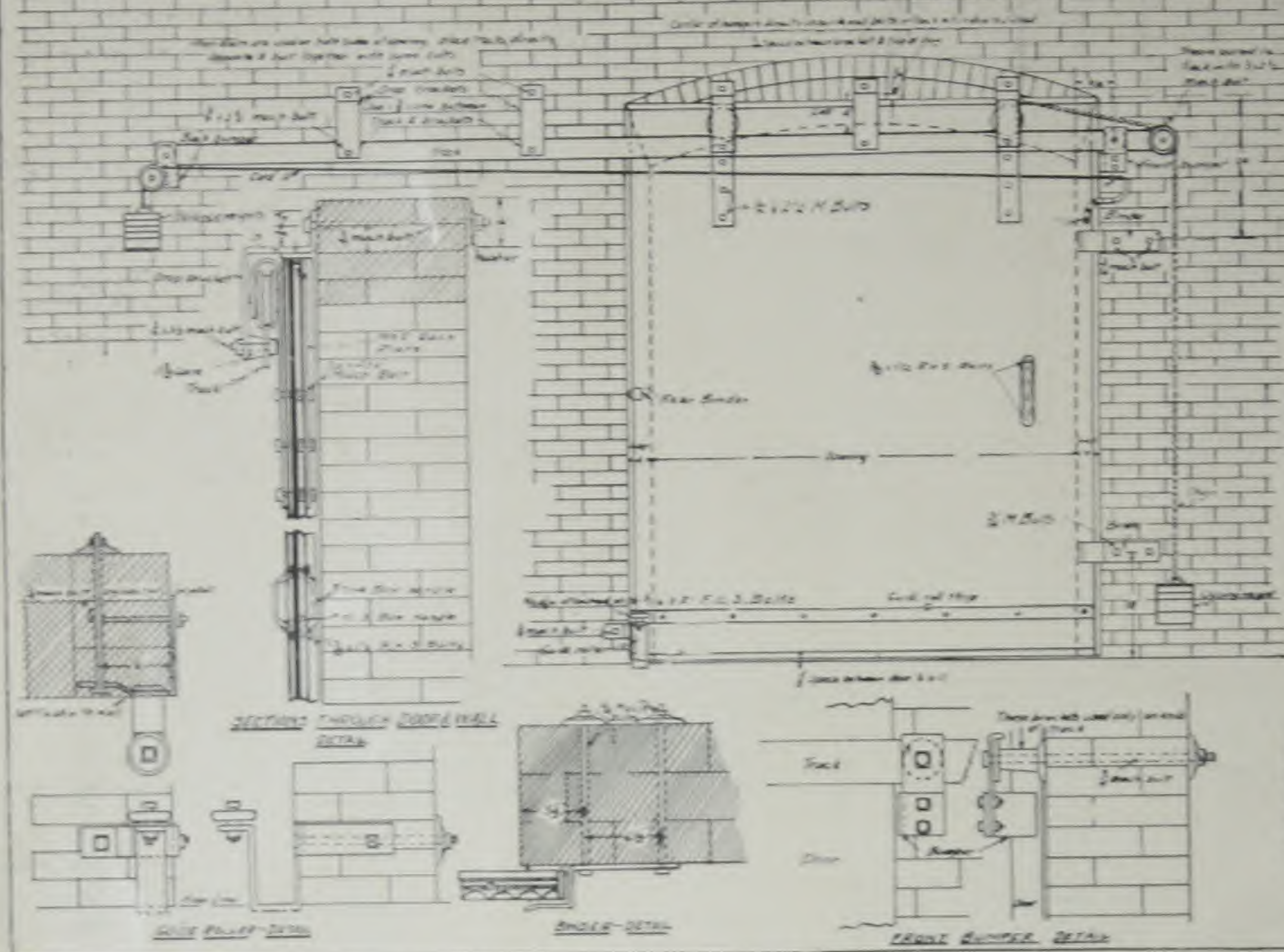
W-304 M.B.E. LEVEL TRACK FIRE DOOR FIXTURES

REQUIREMENTS: 9 IN. HEADROOM, 19 IN. SIDE WALL SPACE, 19 IN. REAR WALL SPACE, 19 IN. WIDTH OF OPENING, 19 IN. AT REAR EDGE.

Erection plan of Evans "Almetl" Single Sliding Fire Doors, using Level Track, Drop Bracket Hardware.

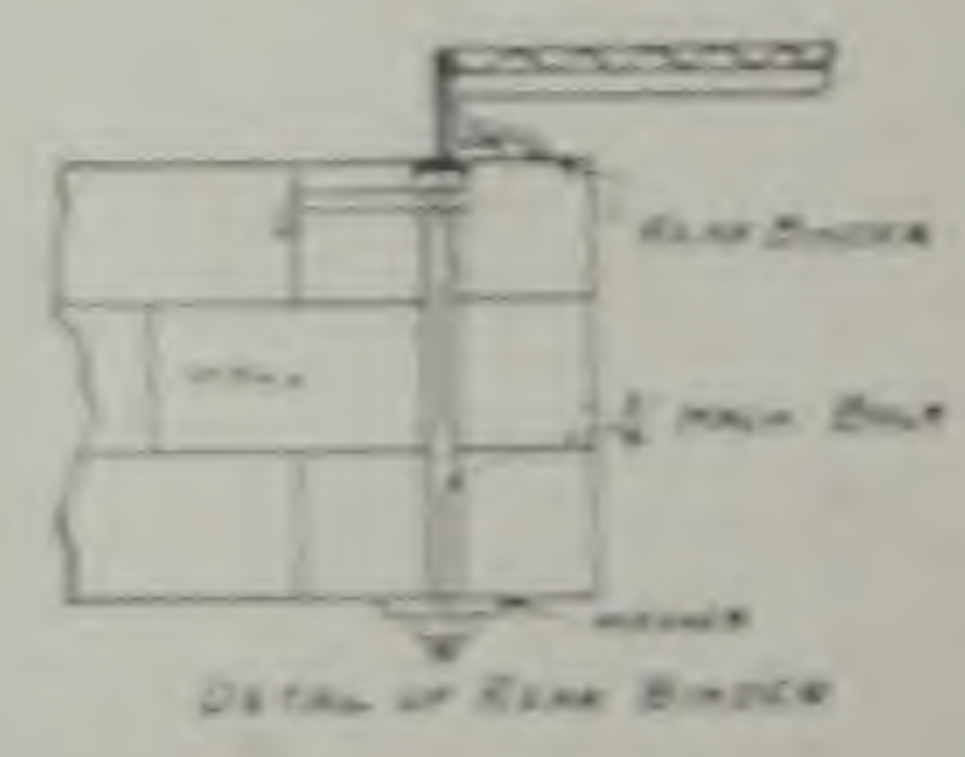


This fixture requires 9 in. headroom. Can furnish 1 ft. headroom as low as 7 1/2 in. when required. 19 in. side wall space required at closing edge. Width of opening plus 19 in. at rear edge.

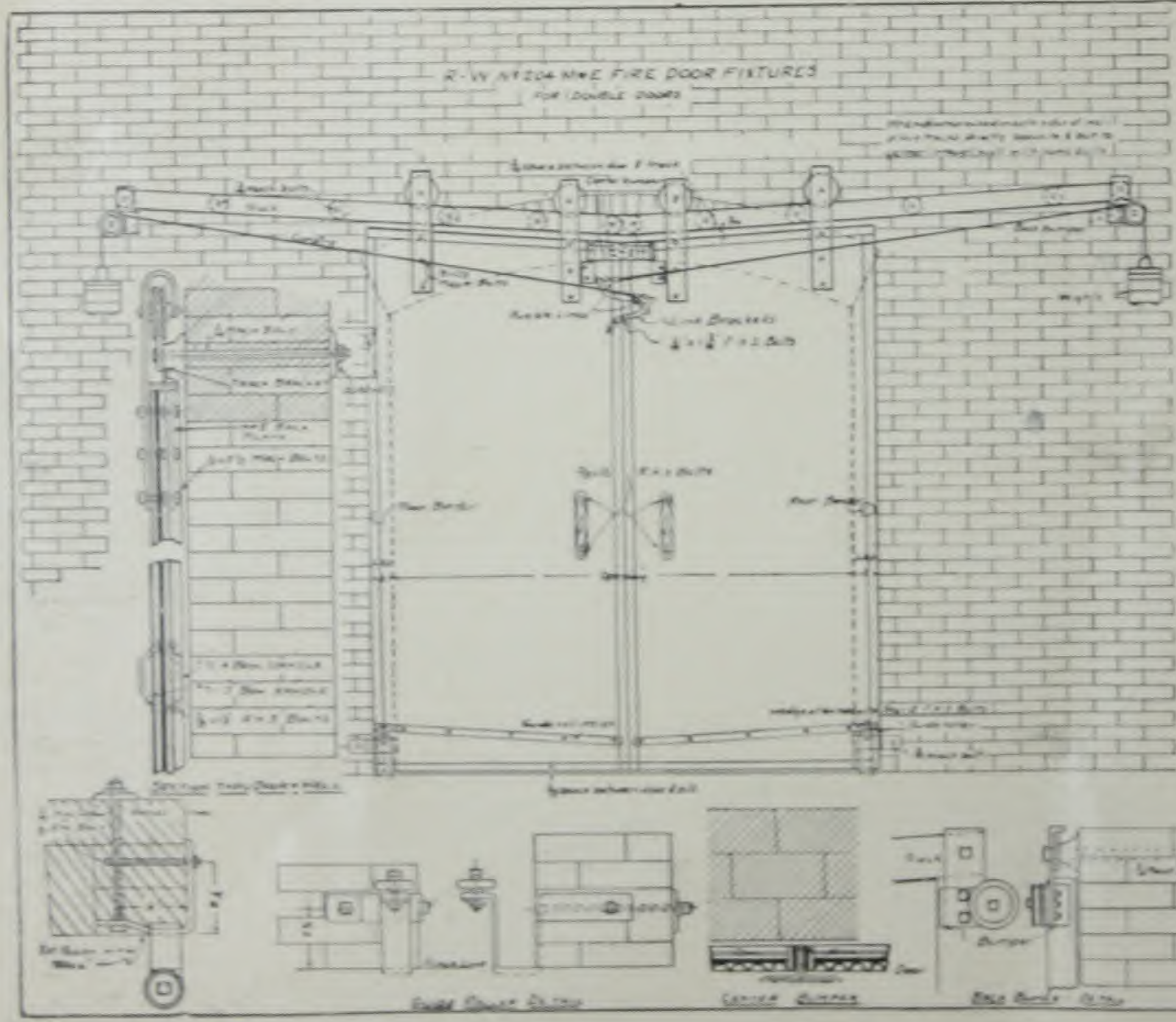


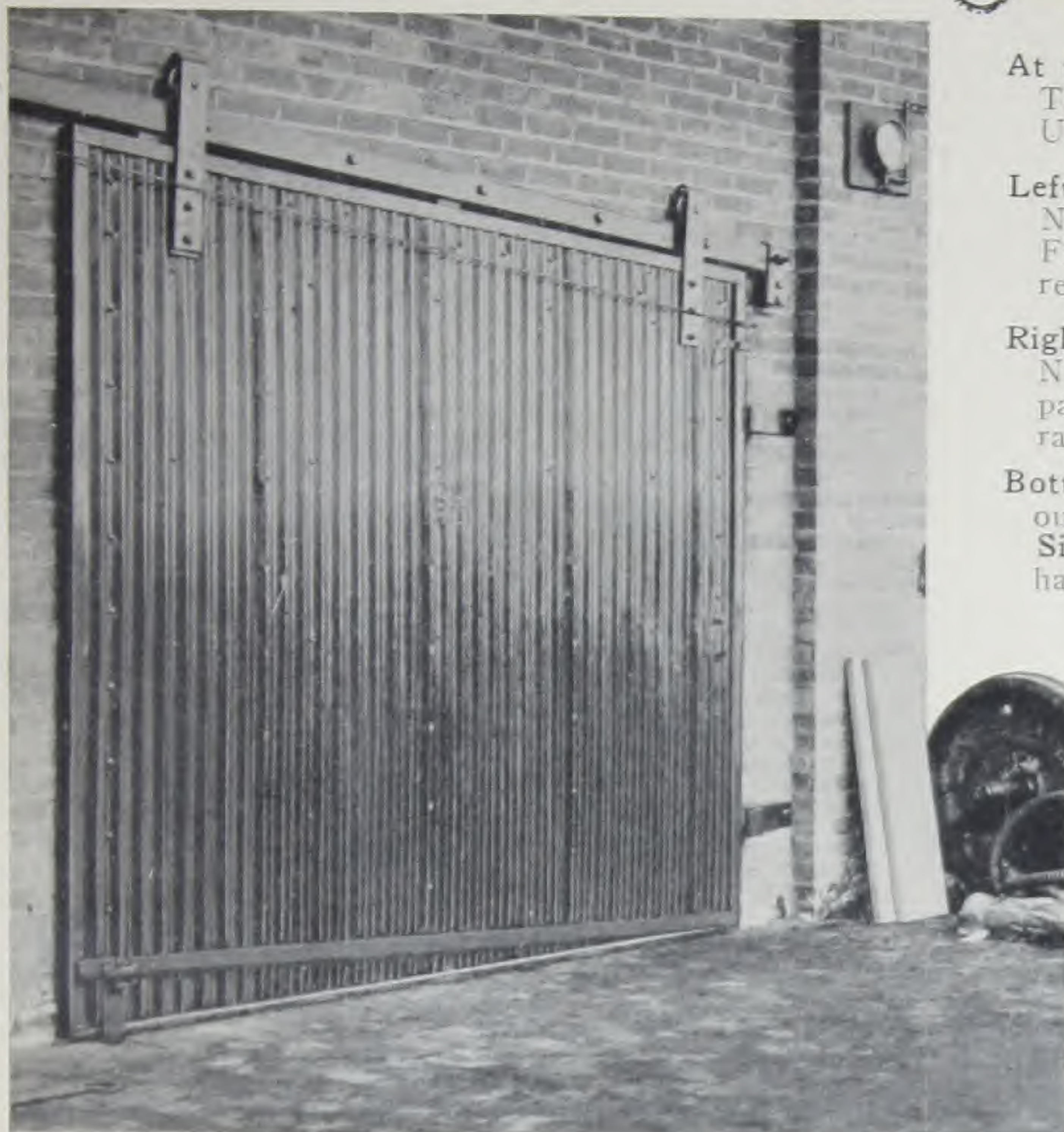
R-W-304 M.B.E. FIRE DOOR FIXTURES FOR DOUBLE DOORS

Erection plan of Evans "Almetl" Double Sliding Fire Doors, with Flat Track Hardware.



This fixture requires 14 in. of headroom and 1/2 in. of 1 in. more for each foot of track. Side wall space required at rear edge equals 1/2 width of opening plus 15 in.



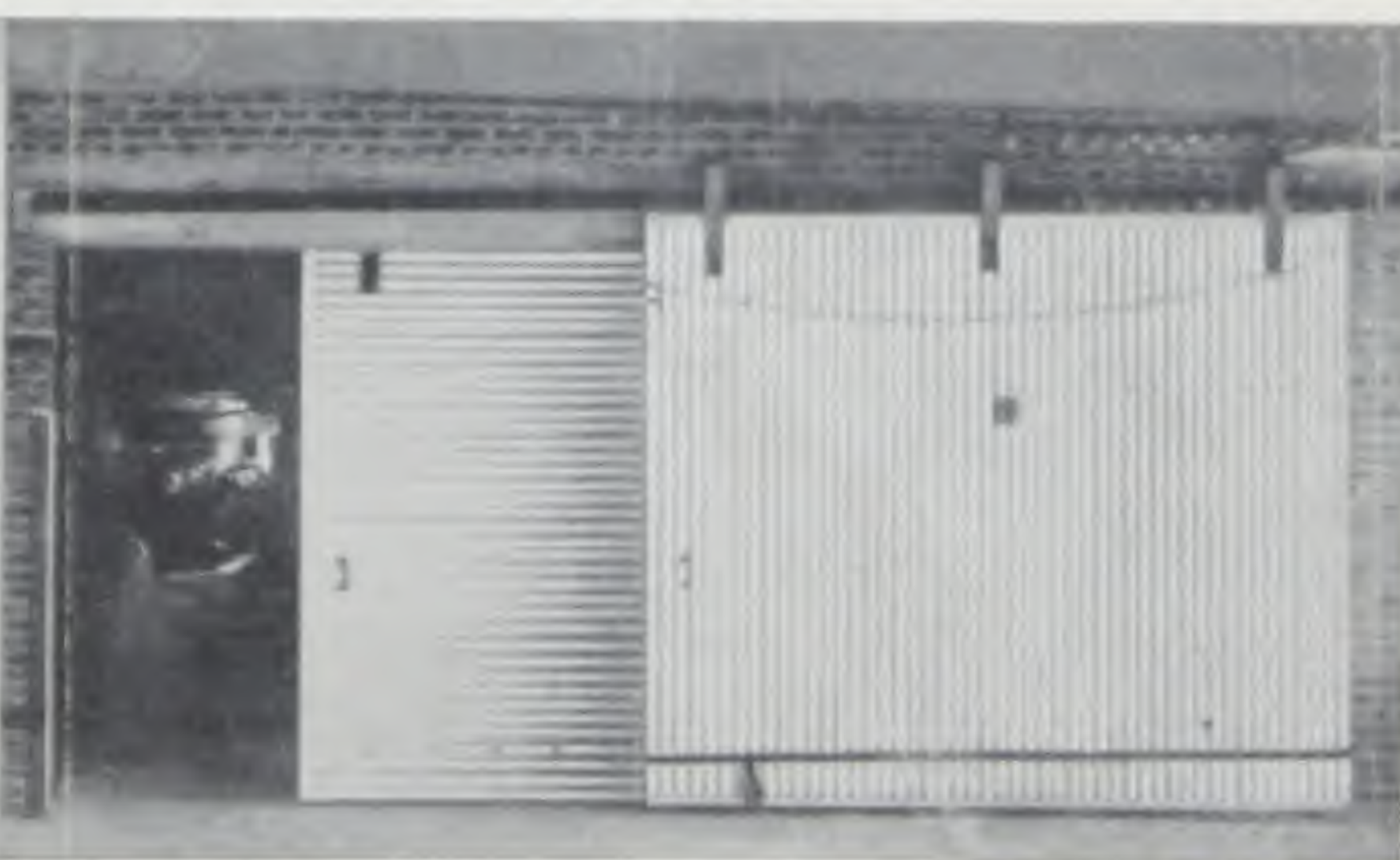
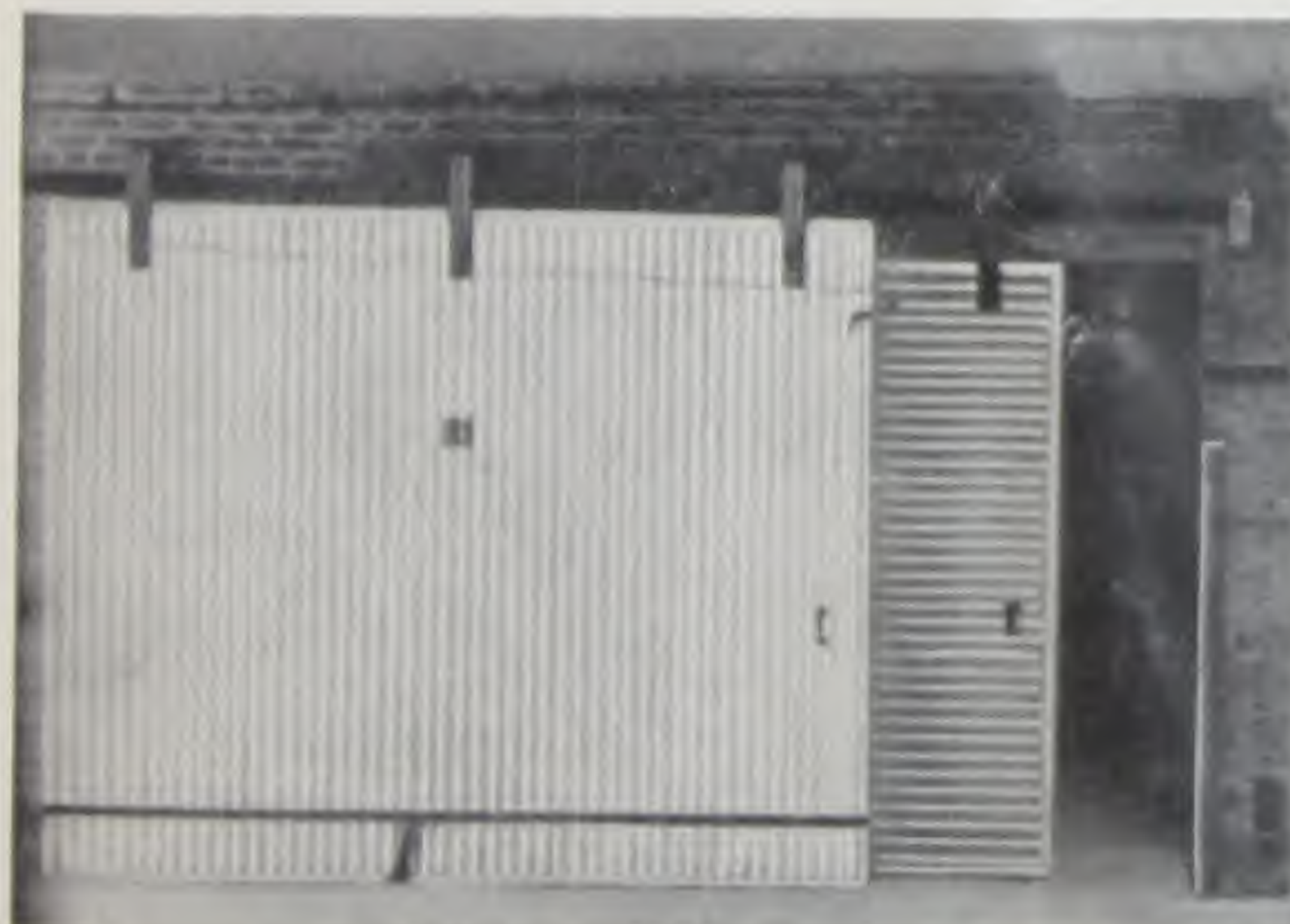


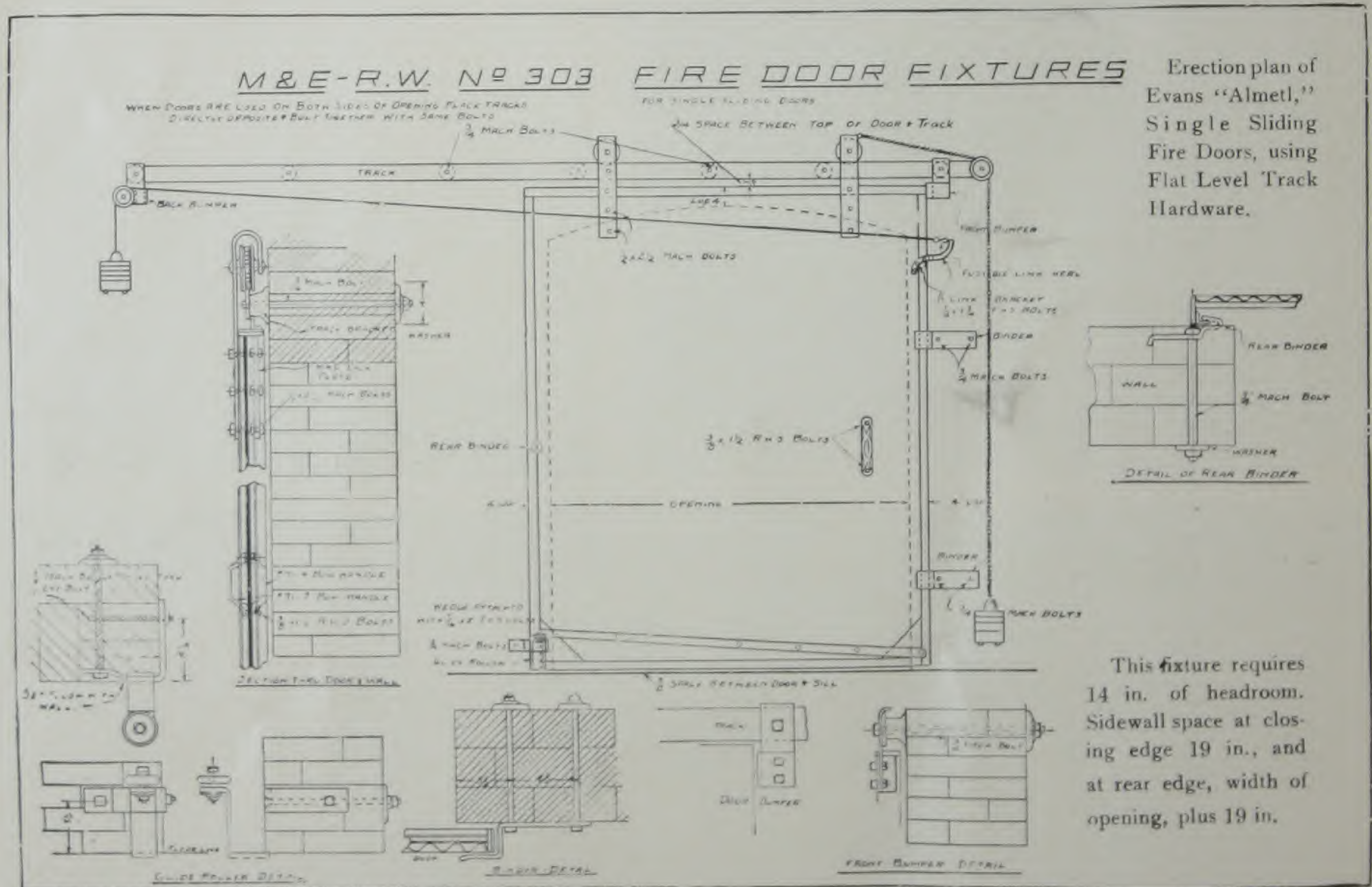
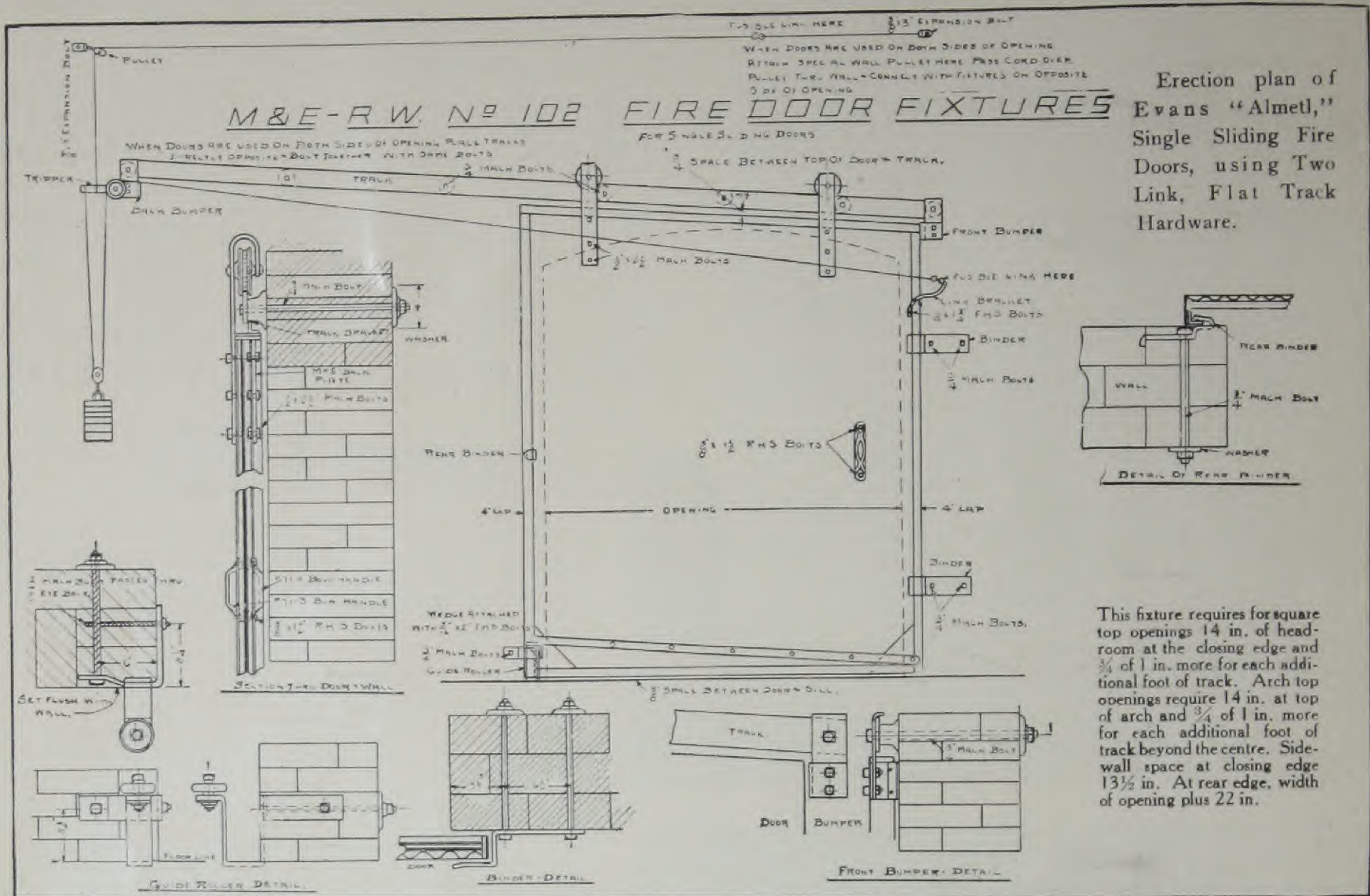
At top, Evans "Almetl" Single Sliding Fire Doors, Inclined Top with flat track hardware, in Warehouse of Detroit United Railway Co., Detroit, Mich.

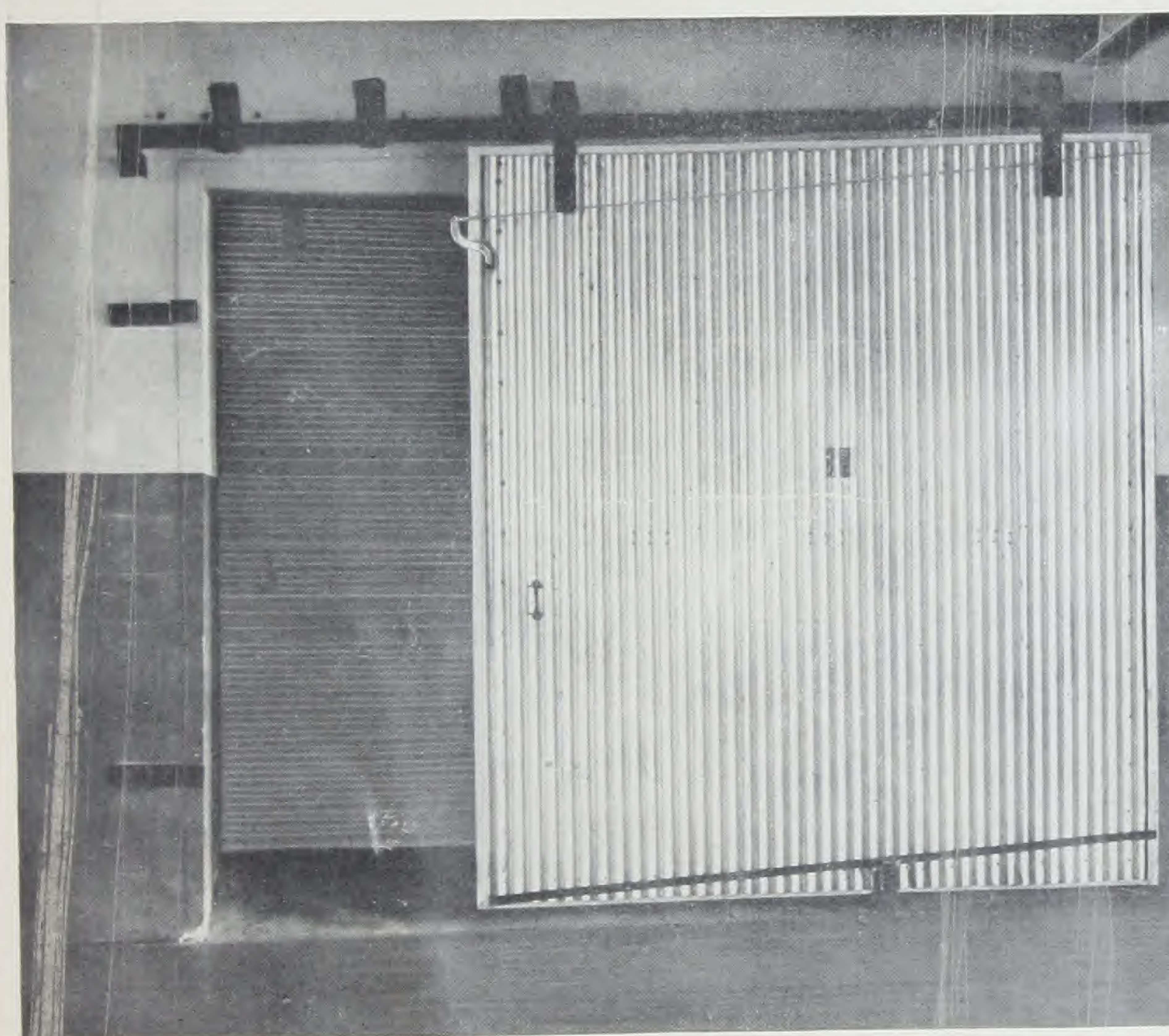
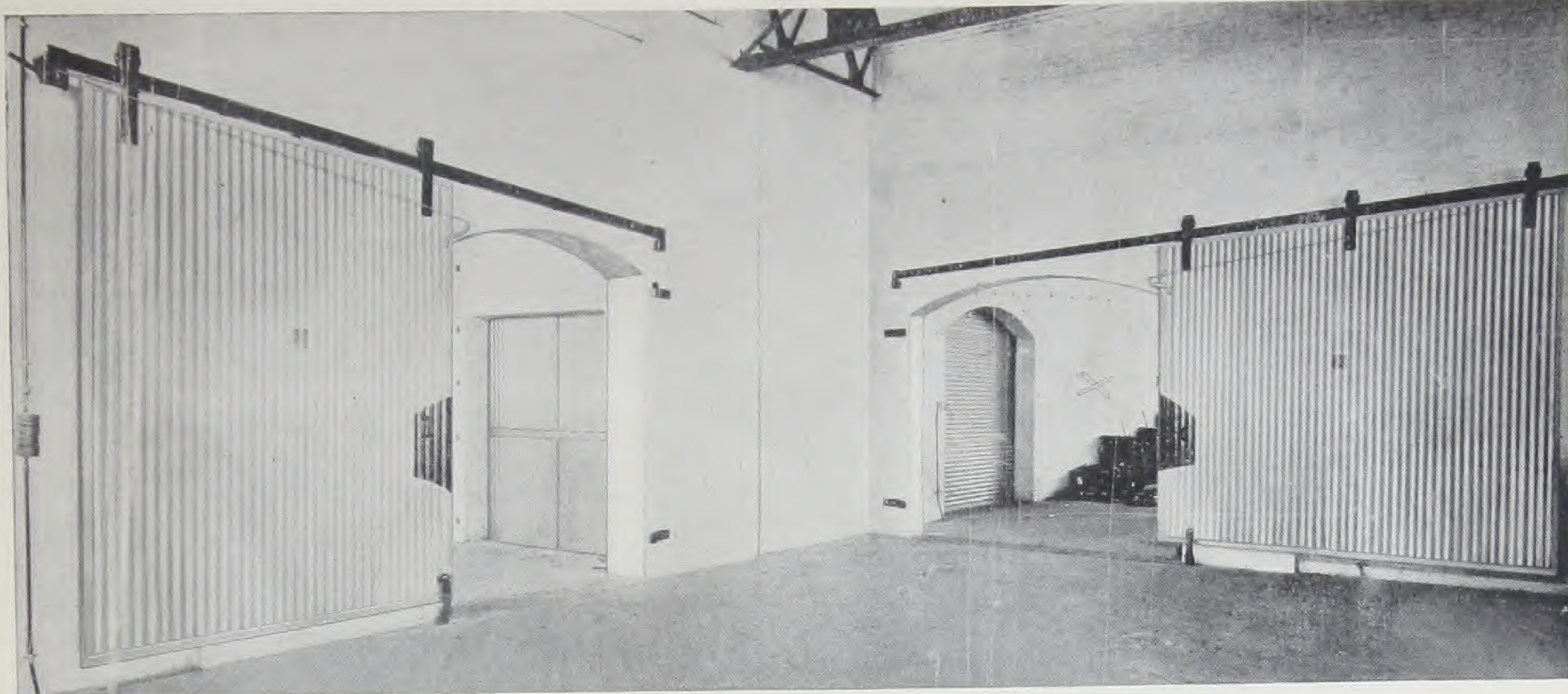
Left center, Fitzgibbons & Crisp's Wagon Works, Trenton, N. J., showing series of Evans "Almetl" Double Sliding Fire Doors, Inclined Top, with round track hardware. Note recess at top of doors for overhead track.

Right center, Wells Fargo Express Company office building, New York City. Evans "Almetl" Single Sliding Fire Doors, painted white to match the marble walls and floor; arranged to slide into the wall.

Bottom of page, Pennsylvania Railroad Company's in and outbound freight station, Philadelphia. Evans "Almetl" Single Sliding Fire Doors, Inclined Top, with flat track hardware, protect both sides of openings.





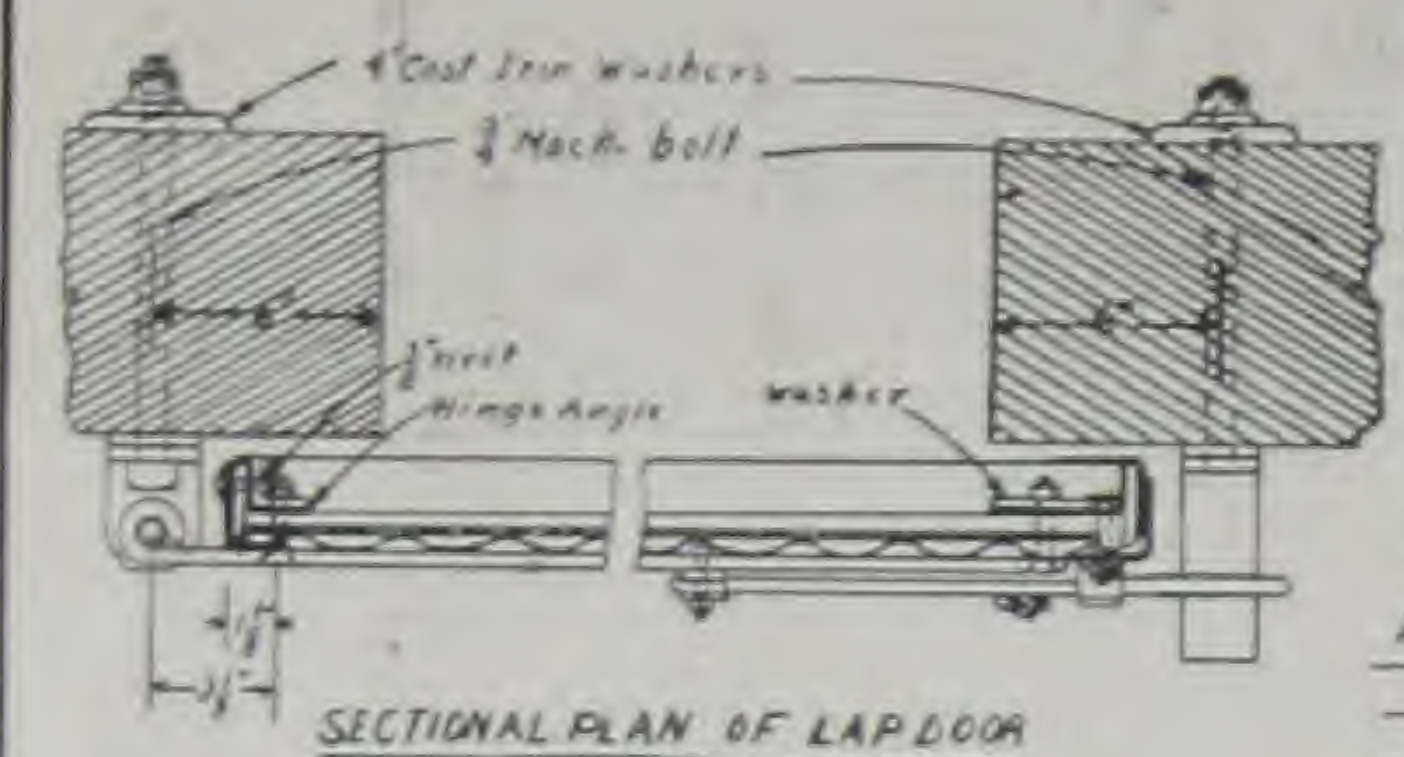


Above, Evans Almetl Single Sliding Fire Doors, Inclined Top, with flat track hardware, protecting arched top openings in one of the largest wire rope works in America.

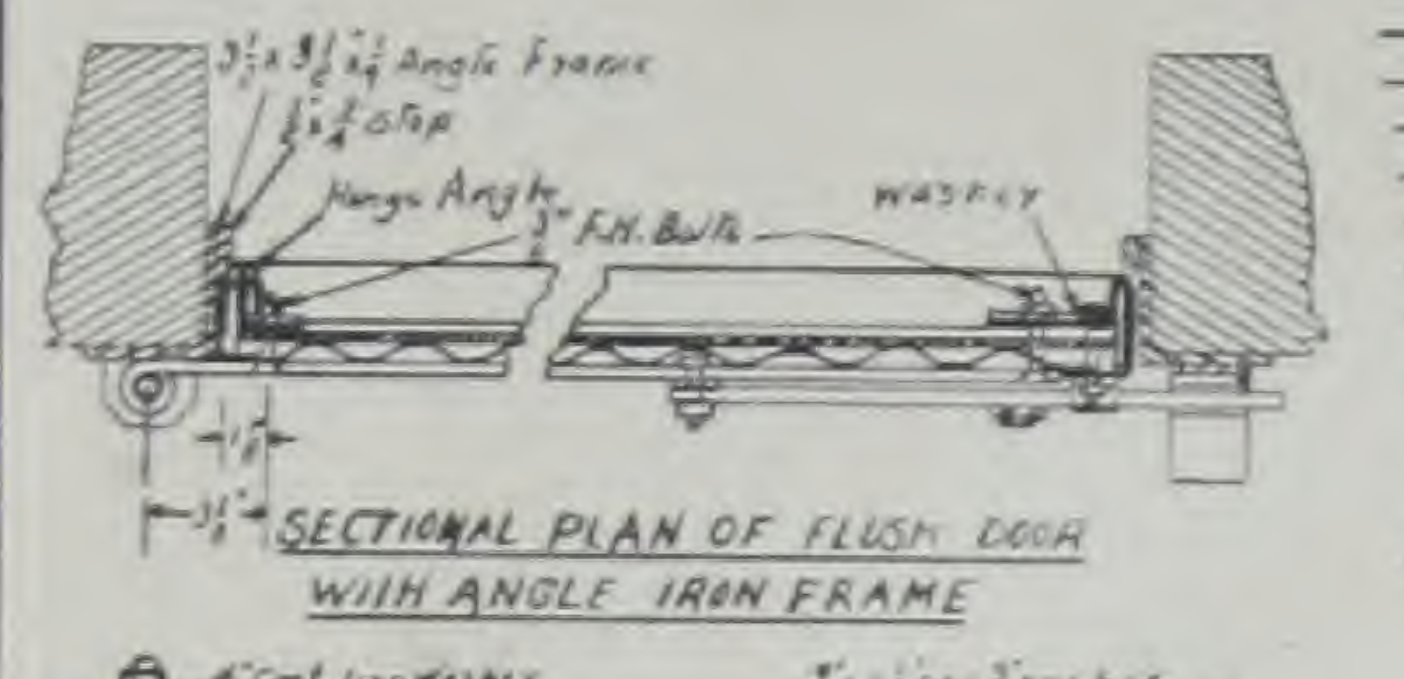
At left, Garage of Holmes-Adkins Co., Omaha, Neb., in which both sides of openings are protected by Evans "Almetl" Single Sliding Inclined Top Fire Doors, equipped with 2-link flat track hardware.

Bottom, Liggett & Myers Tobacco Co., Lexington, Ky. Both sides of all openings are protected with Evans "Almetl" Single Sliding Inclined Top Fire Doors, using 2-link round track hardware.

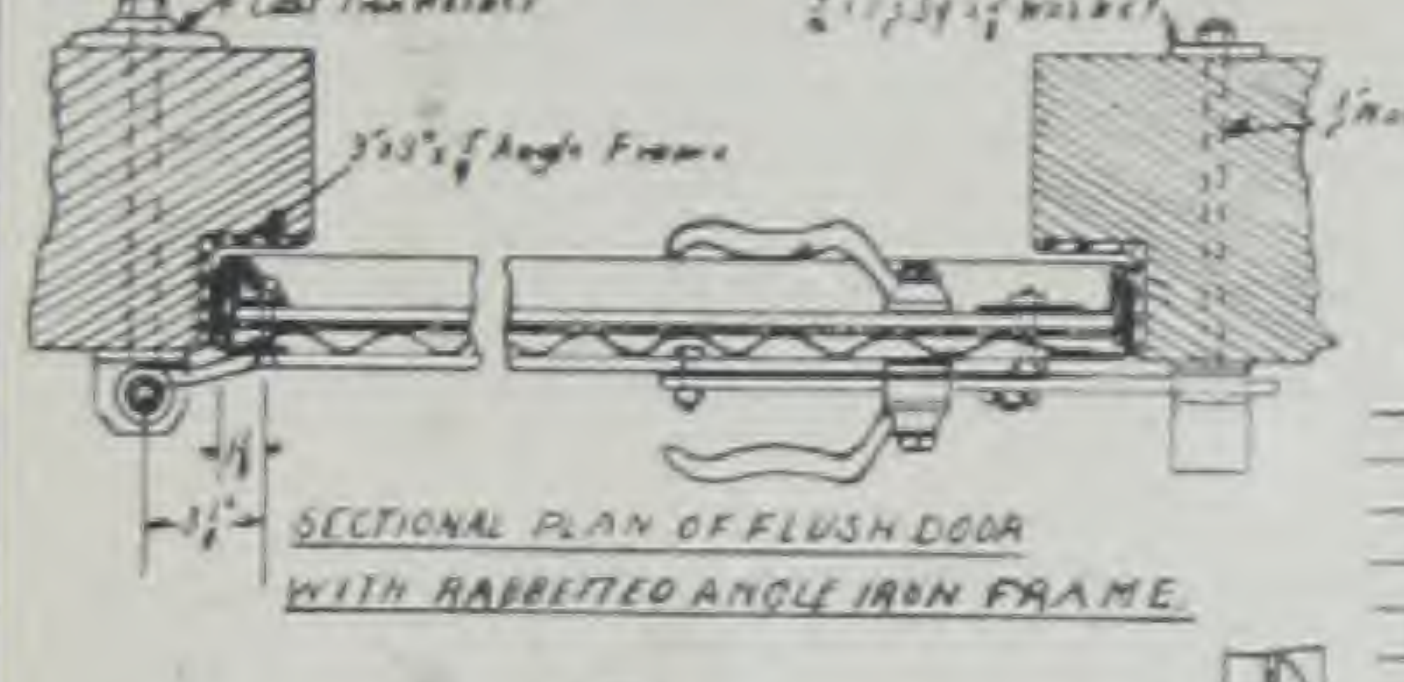




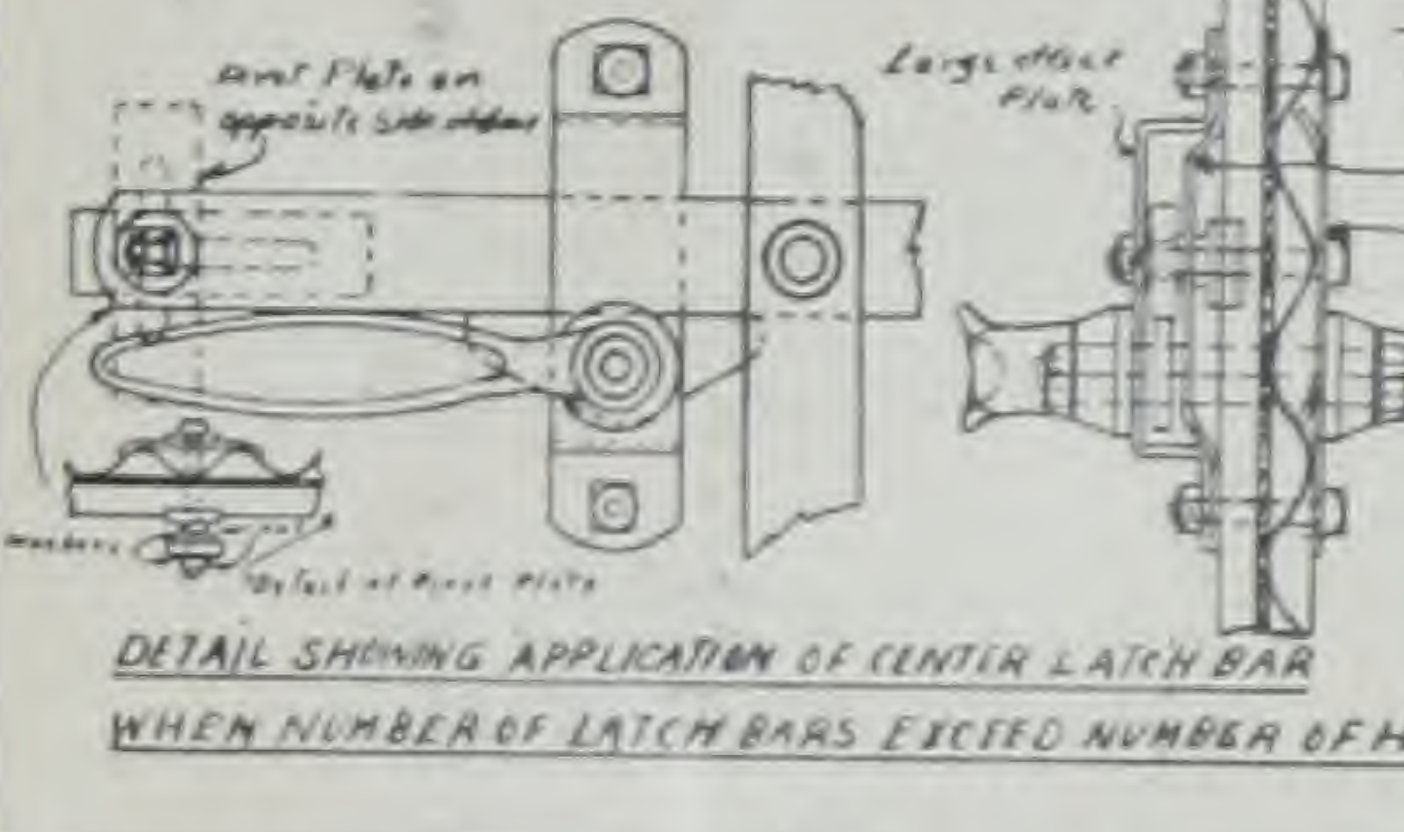
SECTIONAL PLAN OF LAP DOOR



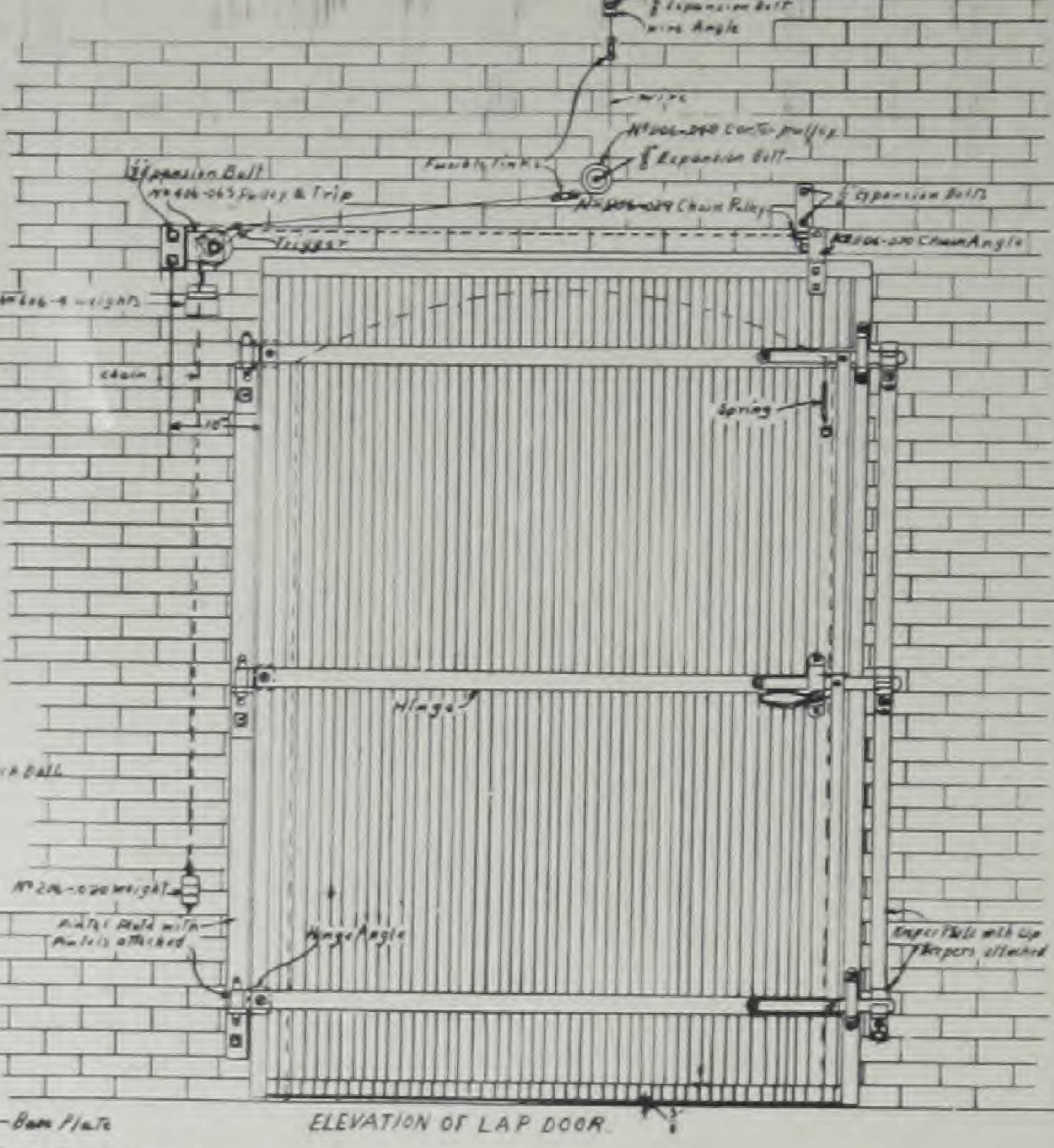
SECTIONAL PLAN OF FLUSH DOOR WITH ANGLE IRON FRAME



SECTIONAL PLAN OF FLUSH DOOR WITH RABBETED ANGLE IRON FRAME



DETAIL SHOWING APPLICATION OF CENTER LATCH BAR WHEN NUMBER OF LATCH BARS EXCEEDS NUMBER OF HINGES



ELEVATION OF LAP DOOR

DIRECTIONS FOR MOUNTING

Pinlets—Pinlets for lap and rabbetted flush doors are attached to wall plates and are bolted to the wall with 3/8" inch bolts extending thru pinlet, wall plate & wall. Locate pinlets so hinges will be equal distance from top and bottom of door. The center of the pinlet should be 2" from the edge of the door, not opening. Flush doors require 1/2" clearance between door and frame. Pinlets for flush doors with angle iron frame do not require wall plate but are bolted to the frame with two 3/8" bolts.

Hinges—Place the door in closed position with at least 3/4" blocking under door. Place hinges in pinlets and mark bolt holes on doors, remove doors and drill holes for 3/8" bolts. Attach hinge angles to back side of doors with 3/8" bolts. The oval hole in hinge angle should be opposite bolt hole.

Latch—Bolt first end of latch bars to the hinges on door as shown in detail. Bolt hinges to door with 3/8" flat head bolts. Latch end of hinge should have large square washers under the nut on the back side of the door. When the number of latch bars are not equal to the number of hinges, the first end of the center latch bar is bolted directly to the door using the special pivot plates with long oval holes, on each side of the door, one detail in lower left hand corner. Small offset plates are bolted to the frame of the door to guide each latch bar excepting the one with which the operating handle is to be used. The large offset plate for the operating handle is used on the front of the door and the flat plate on the back of the door. The offset base plate is used beneath the large offset plate with the latch bar between the two plates. Bolt 3/8" bolts for all offset plates. Bolt springs to door with 3/8" bolt.

Keepers—Keepers are attached to wall plates. Keepers for lap doors are bolted thru the wall with 3/8" inch bolts using 4" round cast washers on the opposite side of the wall. Keepers for rabbetted flush doors are bolted thru wall with 3/8" inch bolts and 2" square steel washers on the opposite side of the wall. Keepers for flush doors with angle iron frame, bolt directly to the frame with 3/8" bolts. Note, washers are not required when doors are used on both sides of wall.

Chain Angles—Attach chain angle to the front of the door near top with 3/8" inch bolts as shown.

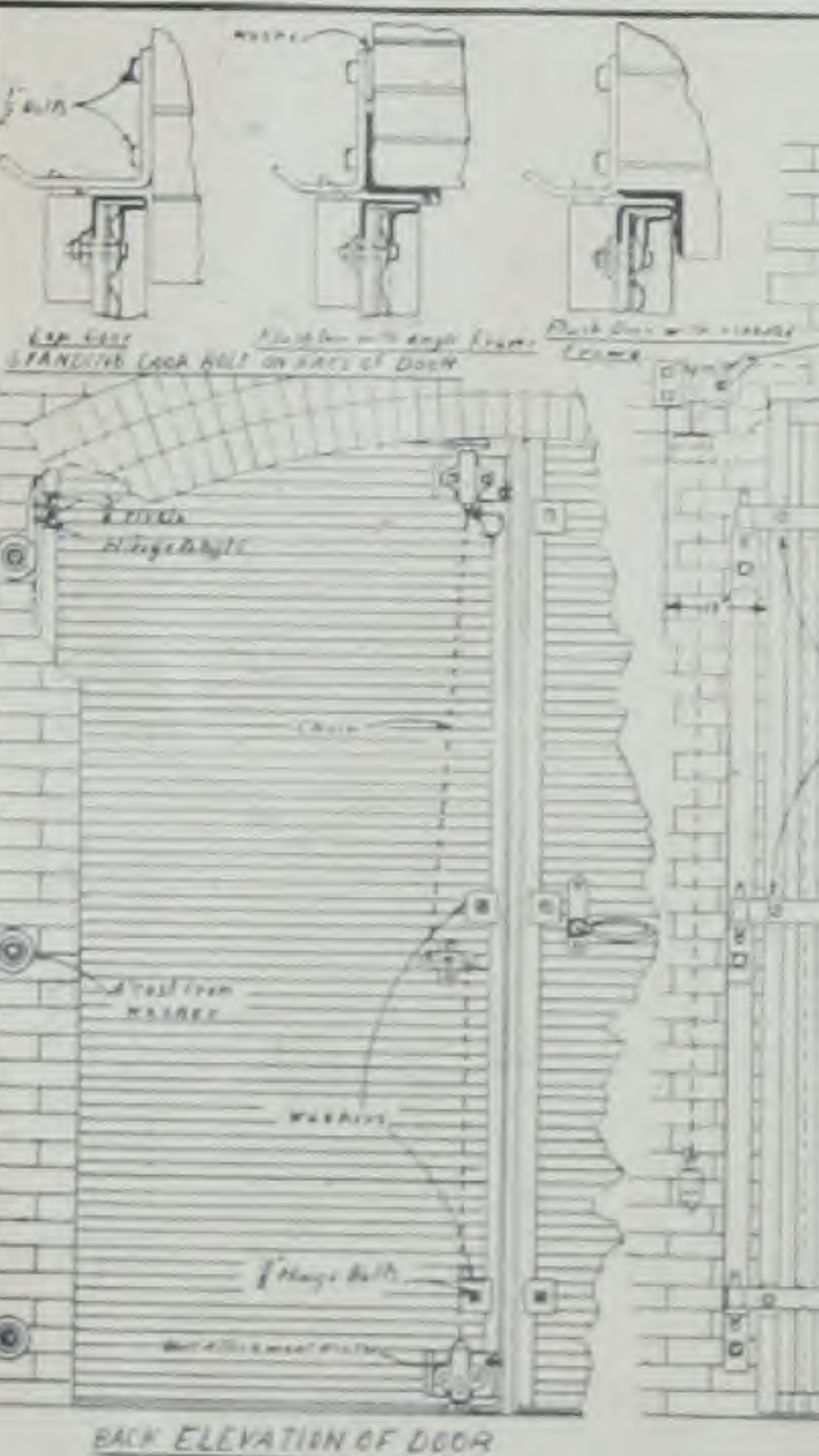
Chain Pulleys—Attach #206-029 chain pulley to wall above door with 3/8" expansion bolts in such position that groove in pulley will be in line with hole in chain angle to which chain is attached. Attach #46-046 pulley to the wall so top of groove in line horizontally with groove of #206-029 chain pulley. #46-046 chain pulley bolt holes should be 10" from edge of door, use 3/8" expansion bolts.

Flexible Link—Fasten #206-040 center pulley to wall above door so that flexible link will be over center of opening. Attach wire to wall near ceiling with 3/8" expansion bolt. Fasten the wire to wire, pass around pulley and back to top of #46-046 Drigger. Draw wire so top of Drigger will be horizontal.

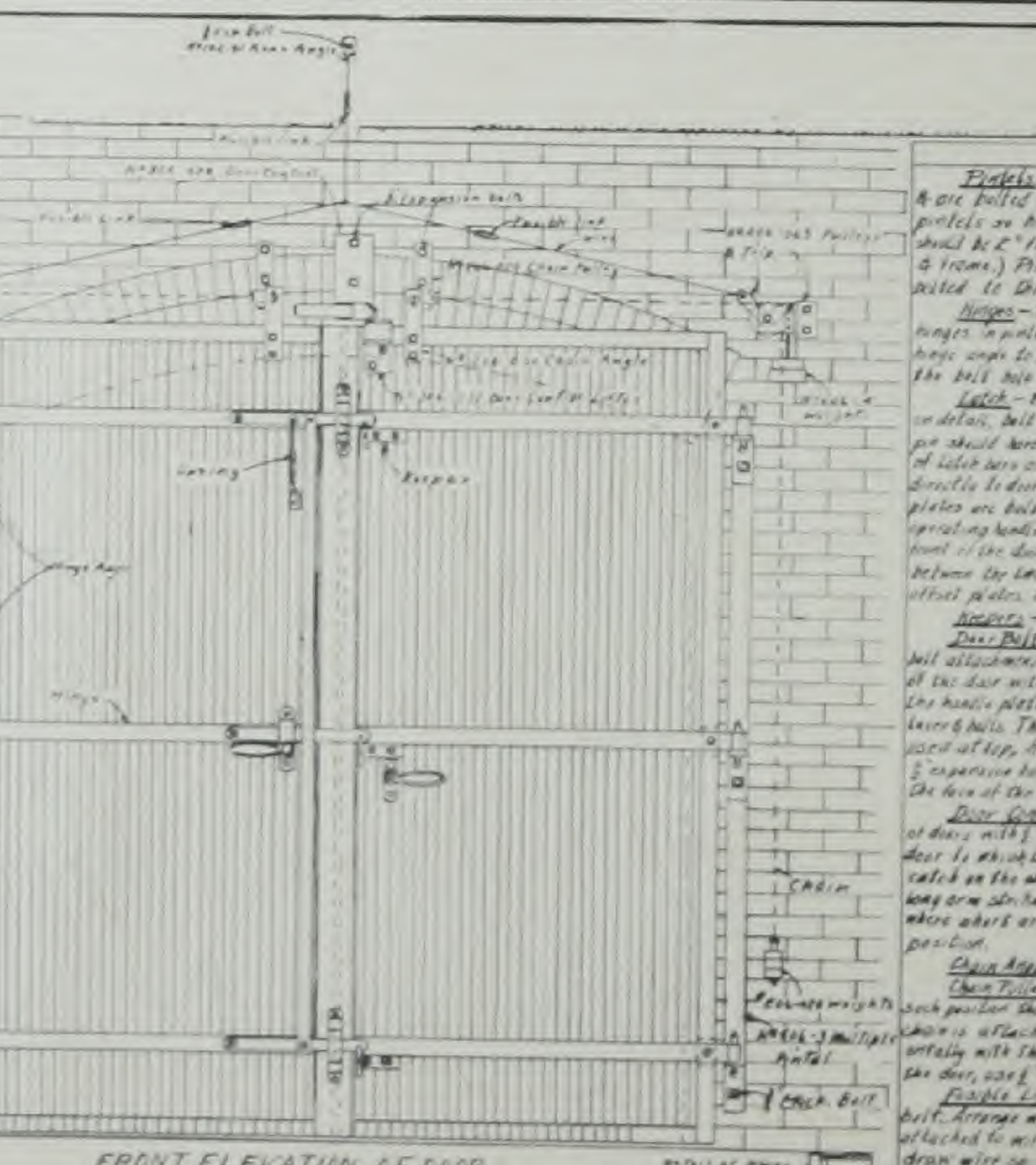
Chain Weights—Hang #606-040 chain weights on fork of trigger. Pass one end of chain up thru hole in angle, over where #46-046 pulley, around shoulder of #206-029 pulley & attach to hole in chain angle by passing a flexible ring in end of chain. Attach #206-029 weights to opposite end of chain, which should be long enough to allow doors to swing open slightly past 90 degree angle only.

Washers—All 3/8" inch bolts passing thru wall require 4" cast washers on opposite side of wall. Washers are not required when doors are used on both sides of wall.

Erection Plan for Evans "Almet" Single Swinging Overlap Type Fire Doors, using M. & E. R-W No. 406 Hardware.



BACK ELEVATION OF DOOR



FRONT ELEVATION OF DOOR

DIRECTIONS FOR MOUNTING

Pinlets—Pinlets for lap and rabbetted flush doors are attached to wall plates & are bolted to wall with 3/8" inch bolts extending thru pinlet, wall plate & wall. Locate the pinlets so hinges will be equal distance from top & bottom of doors, center of pinlet should be 2" from top of door, not opening. Flush doors require 1/2" clearance between door & frame. Pinlets for flush doors with angle iron frame do not require wall plate but are bolted to the frame with two 3/8" bolts.

Hinges—Place doors in closed position with at least 3/4" blocking under door, place hinges in pinlets & mark bolt holes on doors, remove doors & drill holes for 3/8" bolts. Attach hinge angles to back side of doors with 3/8" bolts. The oval hole in hinge angle should be opposite the bolt hole.

Latch—Bolt first end of latch bar to hinges for door which is to close first as shown in detail. Bolt hinges to the doors with 3/8" flat head bolts. Latch end of hinge should have large square washers under the nut on the back side of door when the number of latch bars are not equal to the number of hinges, the first end of the center latch bar is bolted directly to the door using the special pivot plates with long oval holes, one detail in lower left hand corner. Small offset plates are bolted to the frame of the door to guide each latch bar excepting the one with which the operating handle is to be used. The large offset plate for the operating handle is used on the front of the door and the flat plate on the back of the door. The offset base plate is used beneath the large offset plate with the latch bar between the two plates. The flat plate is used under back of the door. Bolt 3/8" bolts for all offset plates. Attach springs to the door with 3/8" bolt.

Keepers—Attach keepers to door with 3/8" bolts as shown.

Door Bolts—Attach top & bottom bolts to back side of standing door with 3/8" inch bolts. Bolt attachment plate between door & bolts and of attachment plate should be bolted to the frame of the door with 3/8" flat head bolts. Attach handle to the order of door on the front side of the door with 3/8" bolts. Chains should be connected to the holes in handle & door bolts. The bolt to which the small gravity weight is attached should always be placed at top. Attach bottom handle to door with 3/8" inch bolts. Attach top keeper to door with 3/8" expansion bolts, which should be used on both sides of wall the bolts should be attached to the face of the door, no attachment plates are required.

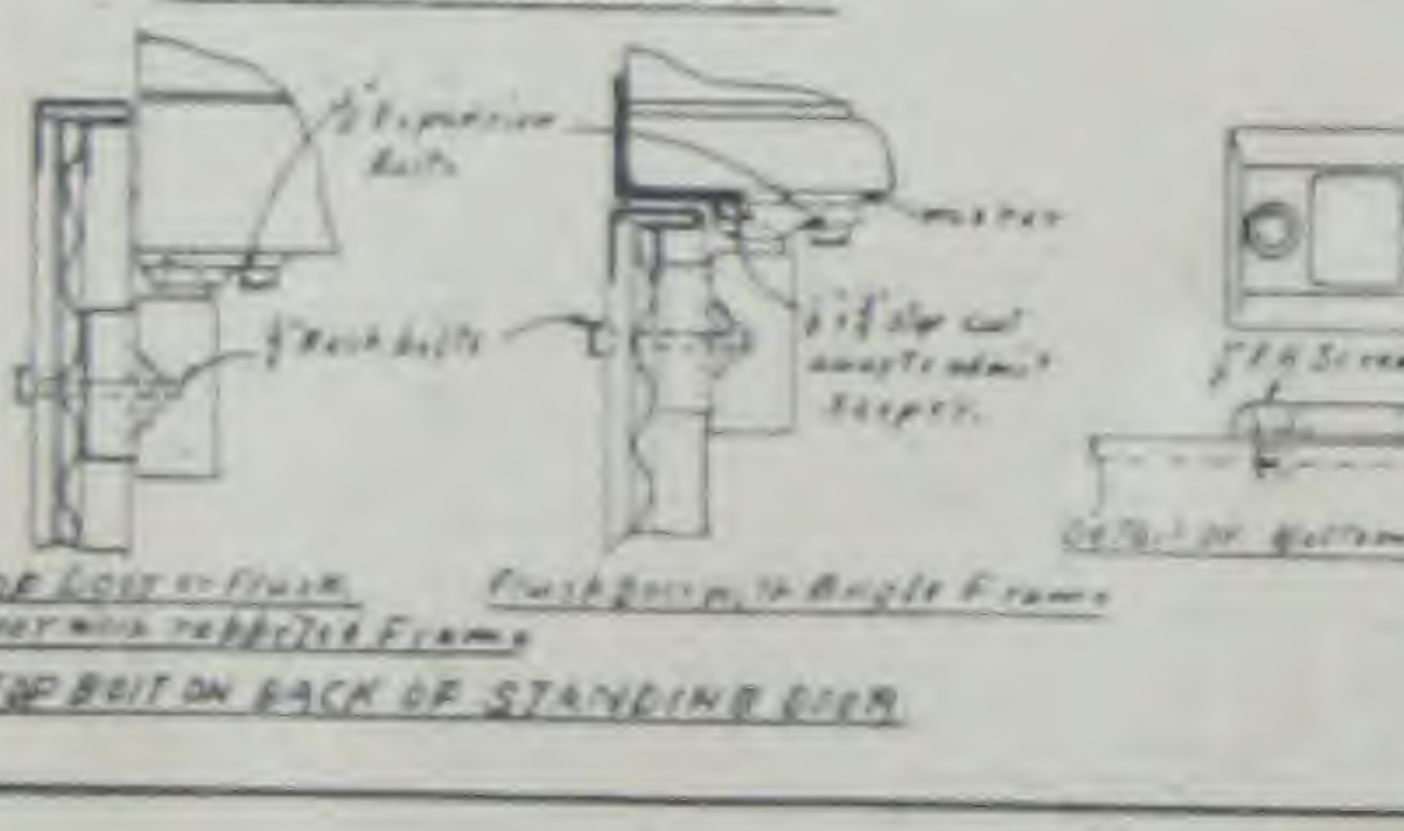
Door Control—Attach door control to the wall over the center of opening & above top of door with 3/8" expansion bolts, test to see that they are deep for enough. To attach top of door to which latches are attached, short wire should not drop lower than 1/2" pointed end of wire on the other door. Short bumper should be under side of top of door at the place where long wire strikes door. Bolt door control to face of standing door opposite point where short wire connects with door & just high enough to lift wire into horizontal position.

Chain Angle—Attach chain angle to top of door near the latch side with 3/8" bolts.

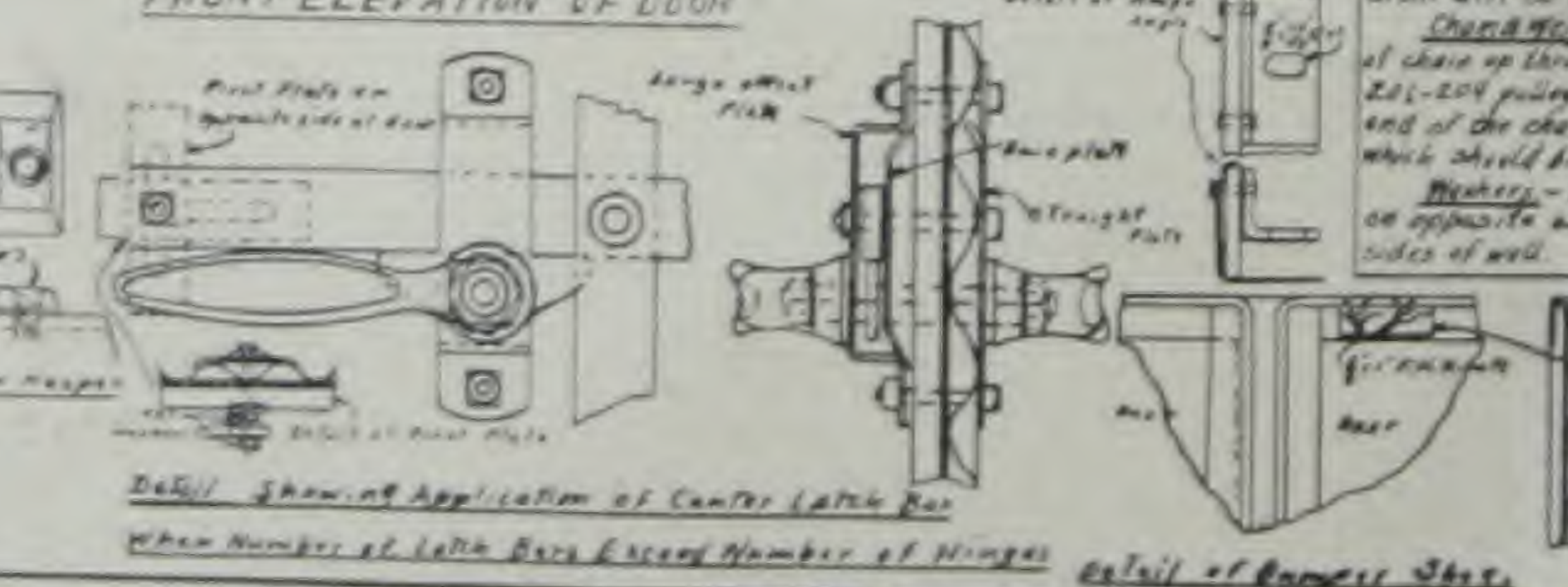
Chain Pulleys—Attach #206-029 chain pulley to wall above door with 3/8" expansion bolts in such position that groove in the pulley will be in line with hole in chain angle. Keep door is attached, attach #46-046 pulley to the wall so top of groove is in line horizontally with the groove of #206-029 chain pulley. #46-046 bolt holes should be 10" from the door, use 3/8" expansion bolts.

Flexible Link—Attach wire angle to wall near ceiling ceiling with 3/8" expansion bolt. Attach wire as shown in elevation using #46-046 pulley around shoulder of #206-029 pulley & attach to hole in chain angle by passing a flexible ring in the end of the chain. Attach #206-029 weights to the opposite end of the chain, which should be long enough to allow doors to swing open slightly past 90 degree angle only.

Washers—All 3/8" inch bolts passing thru wall require 4" cast washers on opposite side of wall. Washers are not required when doors are used on both sides of wall.

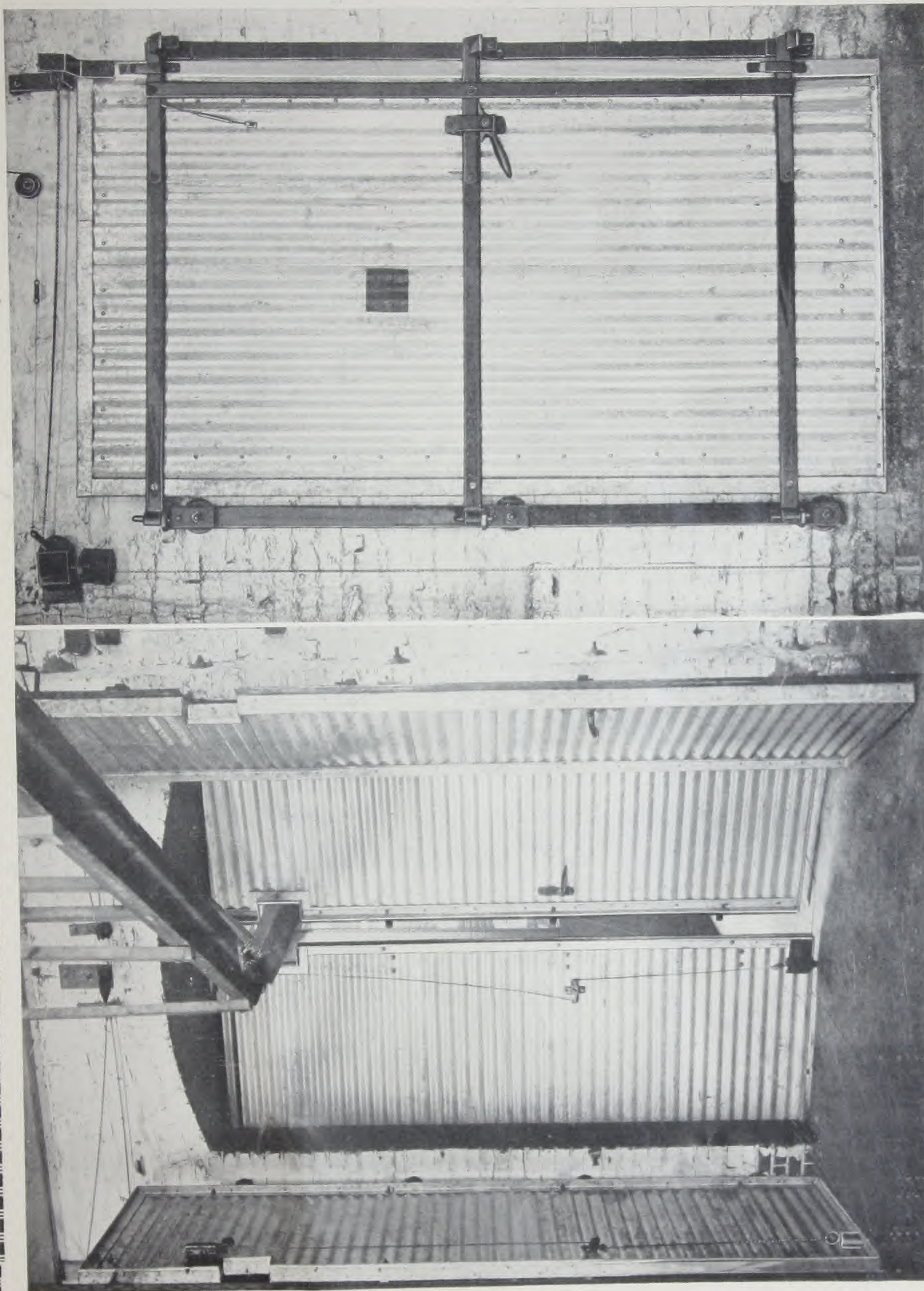


TOP VIEW ON BACK OF STANDING DOOR



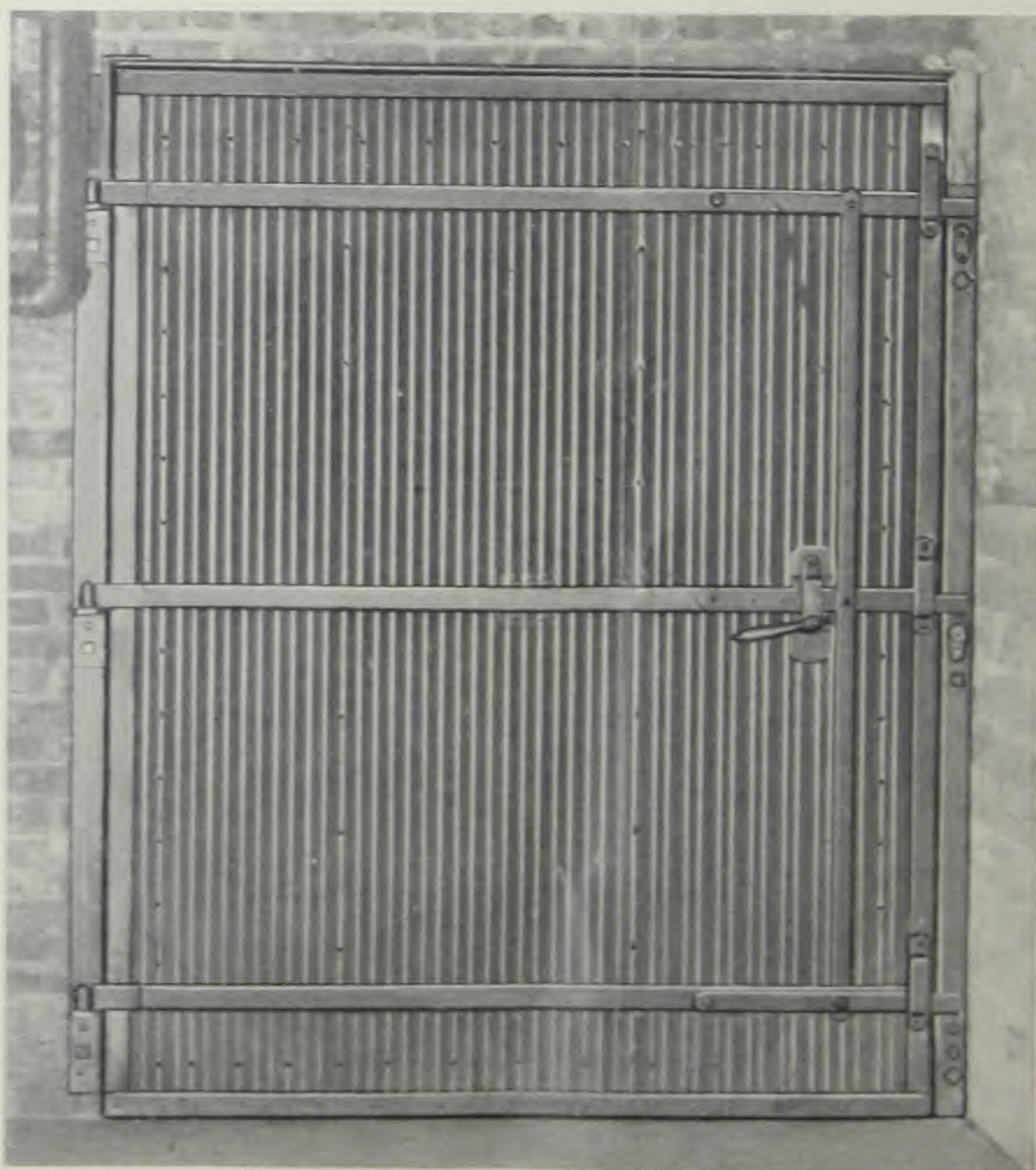
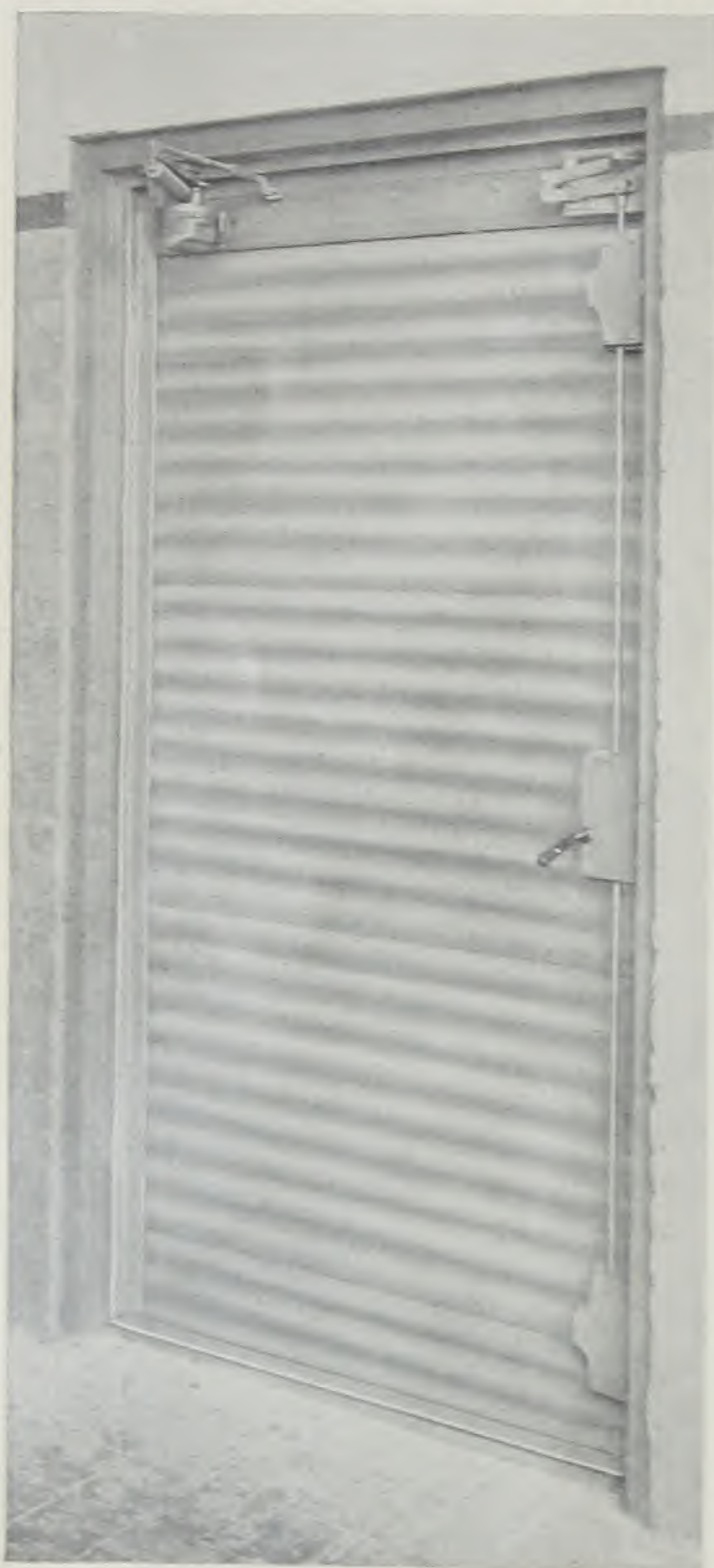
DETAIL SHOWING APPLICATION OF CENTER LATCH BAR WHEN NUMBER OF LATCH BARS EXCEEDS NUMBER OF HINGES

Erection Plan for Evans "Almet" Double Swinging Overlap Type Fire Door —using M. & E. R-W No. 506 Hardware.

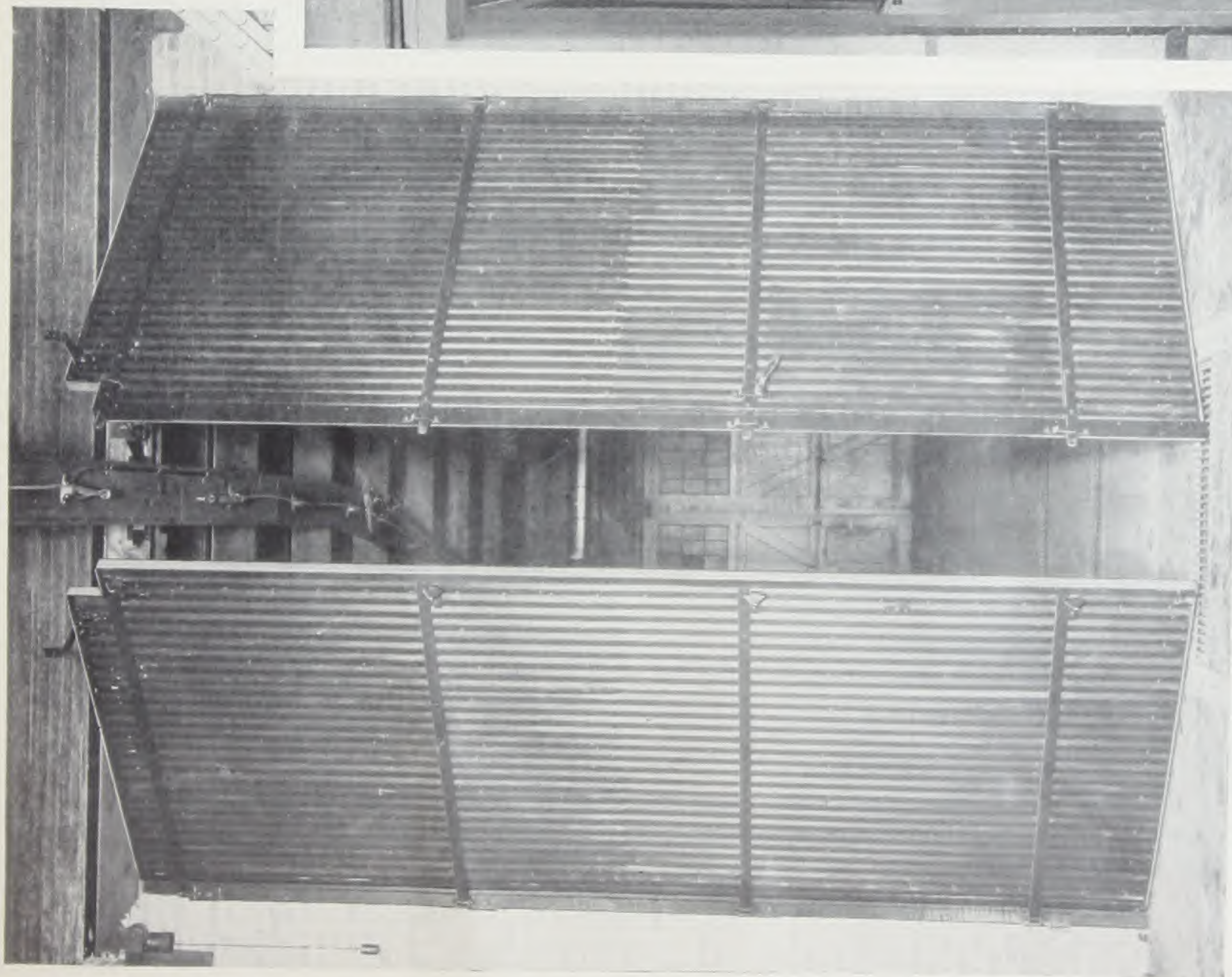


Two views in the plant of W. G. Clore Mfg. Co., Washington, Ind. At right, Evans "Almetl" Single Swinging Fire Door. At left, Evans "Almetl" Double Swinging Fire Doors, Overlap Type, protecting both sides of arched top opening. Note how doors are recessed to provide for overhead trolley track.

NOTE.—Evans "Almetl" Doors are rigid in plane—and do not bend transversely and hit wall in closing.



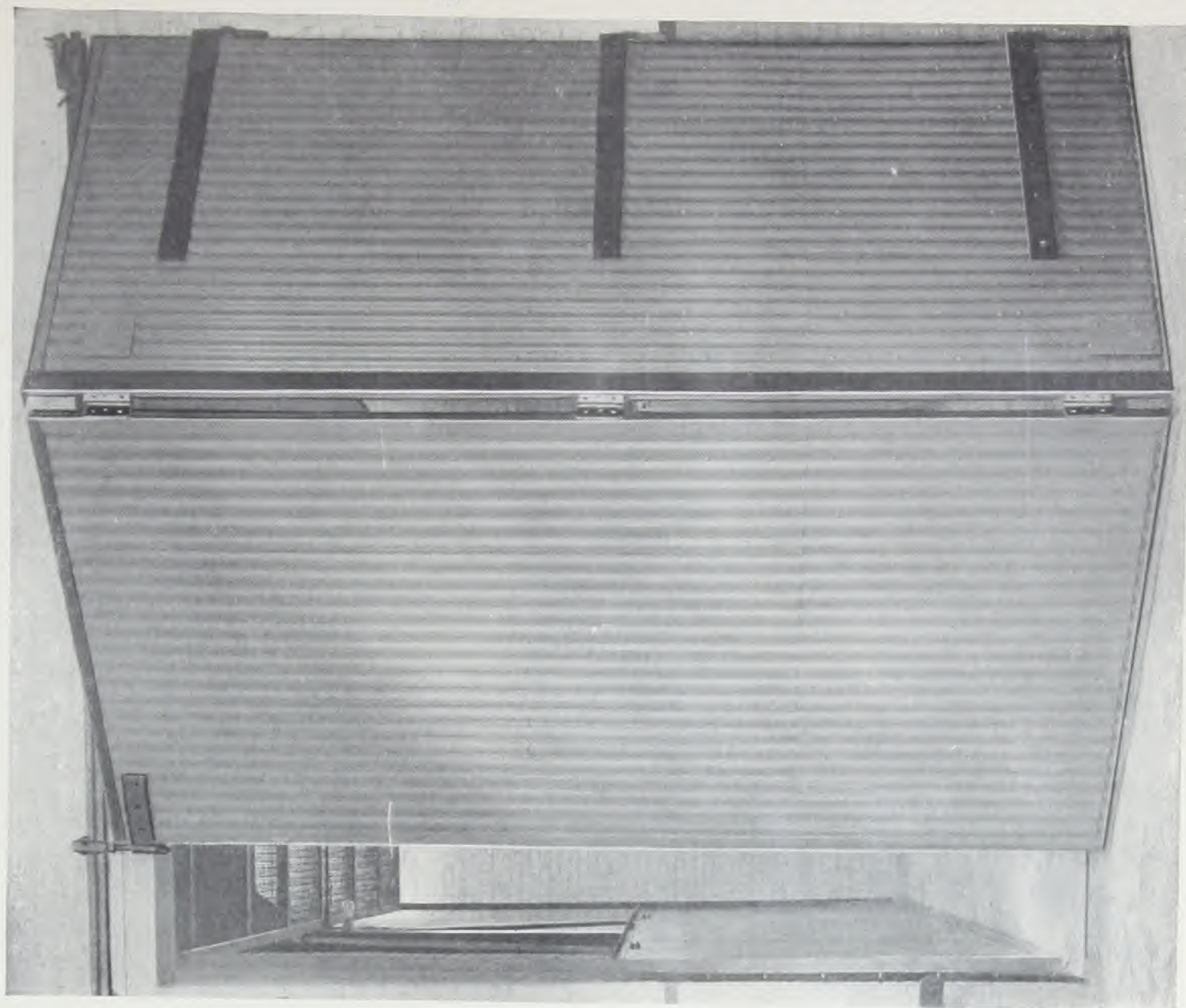
At top, an extra hazardous risk—the woolen rag factory of S. Rainitser Co., Inc., New York. Evans "Almetl" Single Sliding Inclined Fire Doors, with flat track hardware. Center, Evans "Almetl" Single Swinging Fire Door, Flush Type, in Cushman Garage, New York. Note door check and patent lock. Bottom, Single Swinging Evans "Almetl" Fire Door, Flush Type, in rabbeted angle frame, with non-automatic hardware, as used by National Cold Storage Warehouse Co., Brooklyn, N. Y.

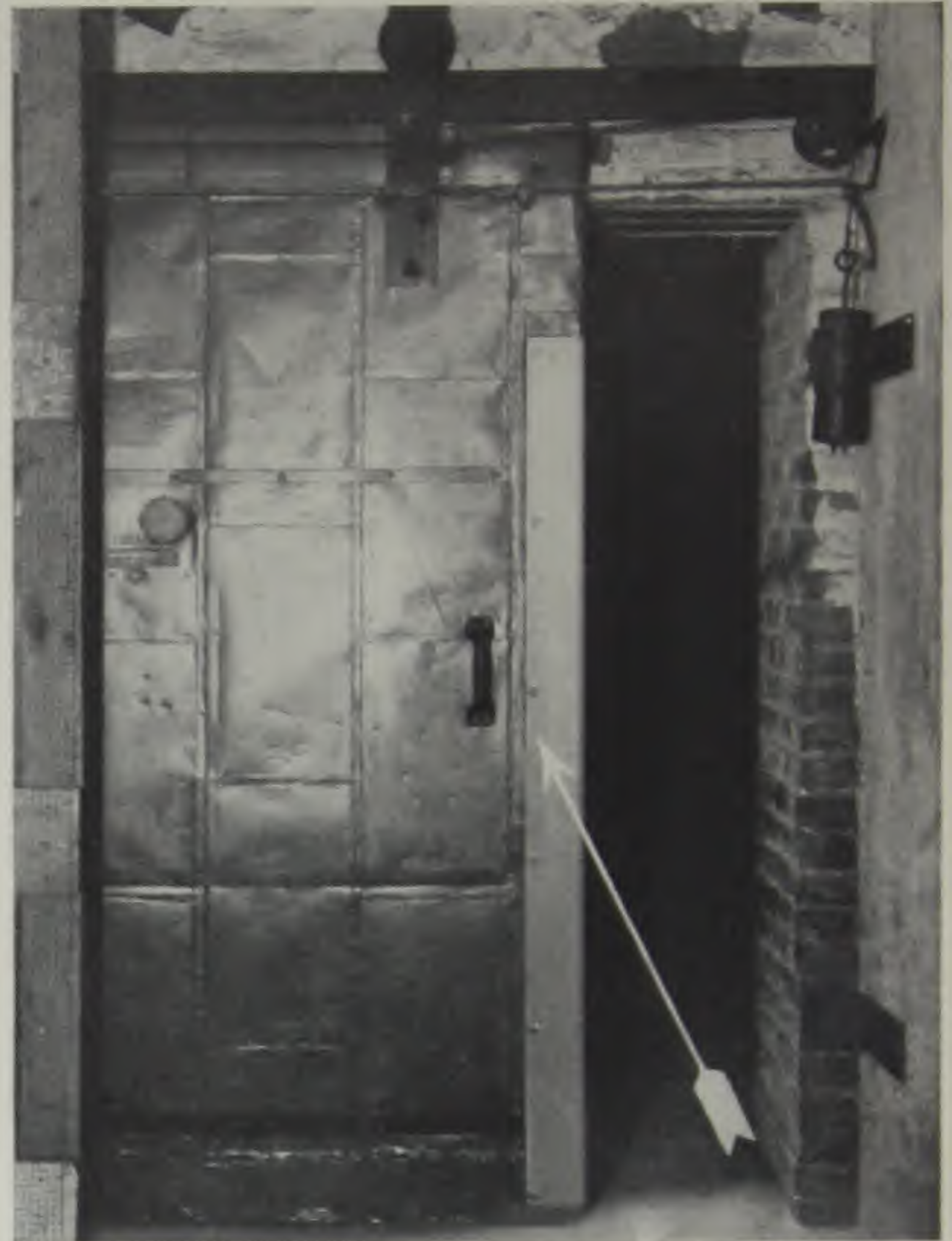
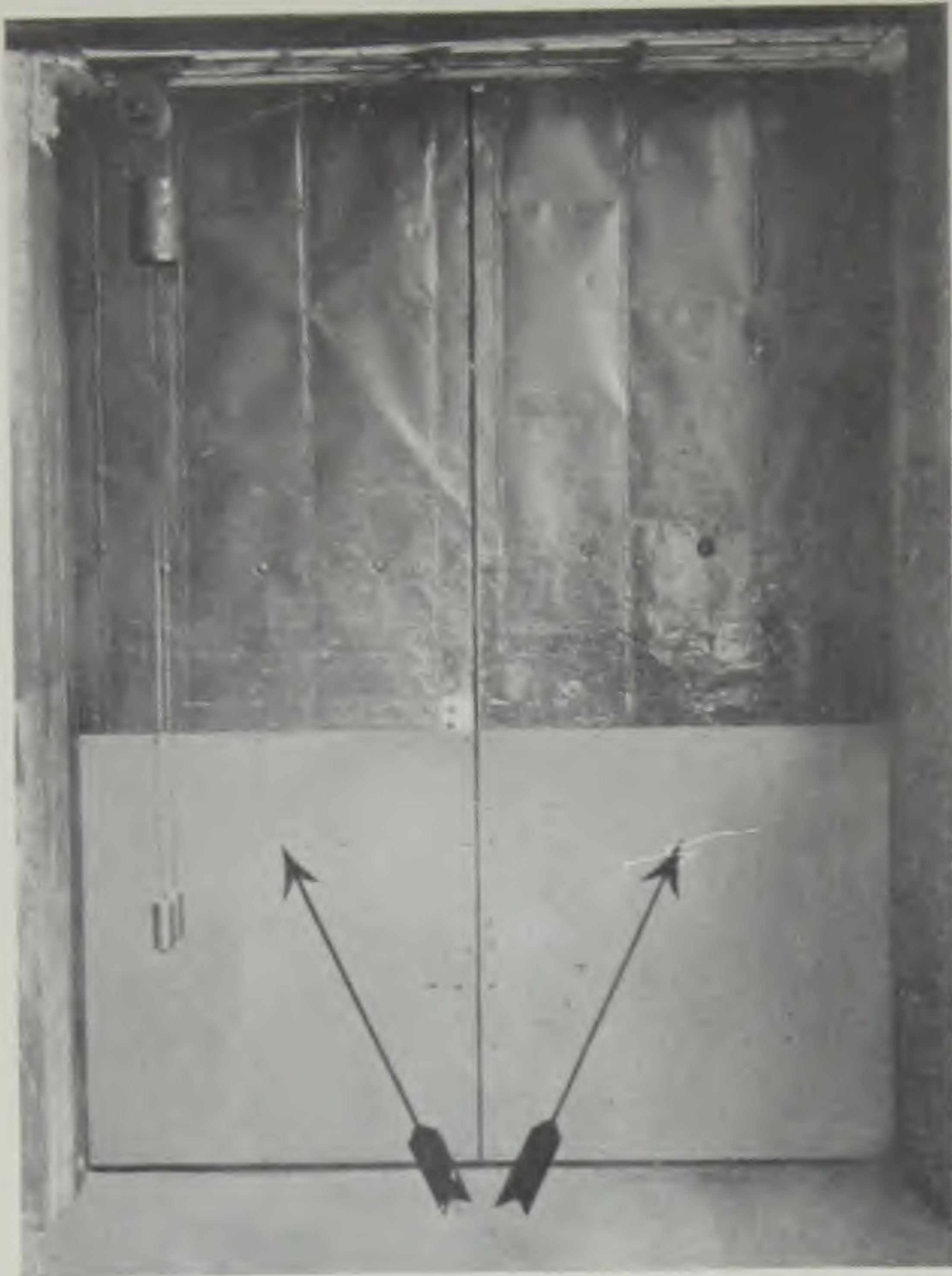


At right, Evans "Almetl" Sliding Folding Fire Doors, installed in Cushman Garage and Stable, Bronx, New York.

NOTE.—Evans "Almetl" Doors are rigid in plane—and do not bend transversely and are indestructible in use.

At left, Evans "Almetl" Double Swinging Fire Doors, Overlap Type, recessed for overhead wiring, installed in carpenter shop of Detroit Electric Railway Co., Detroit, Mich. Although opening is very large, viz., 12 feet six inches wide by 16 feet high, the doors operate with remarkable efficiency and ease.



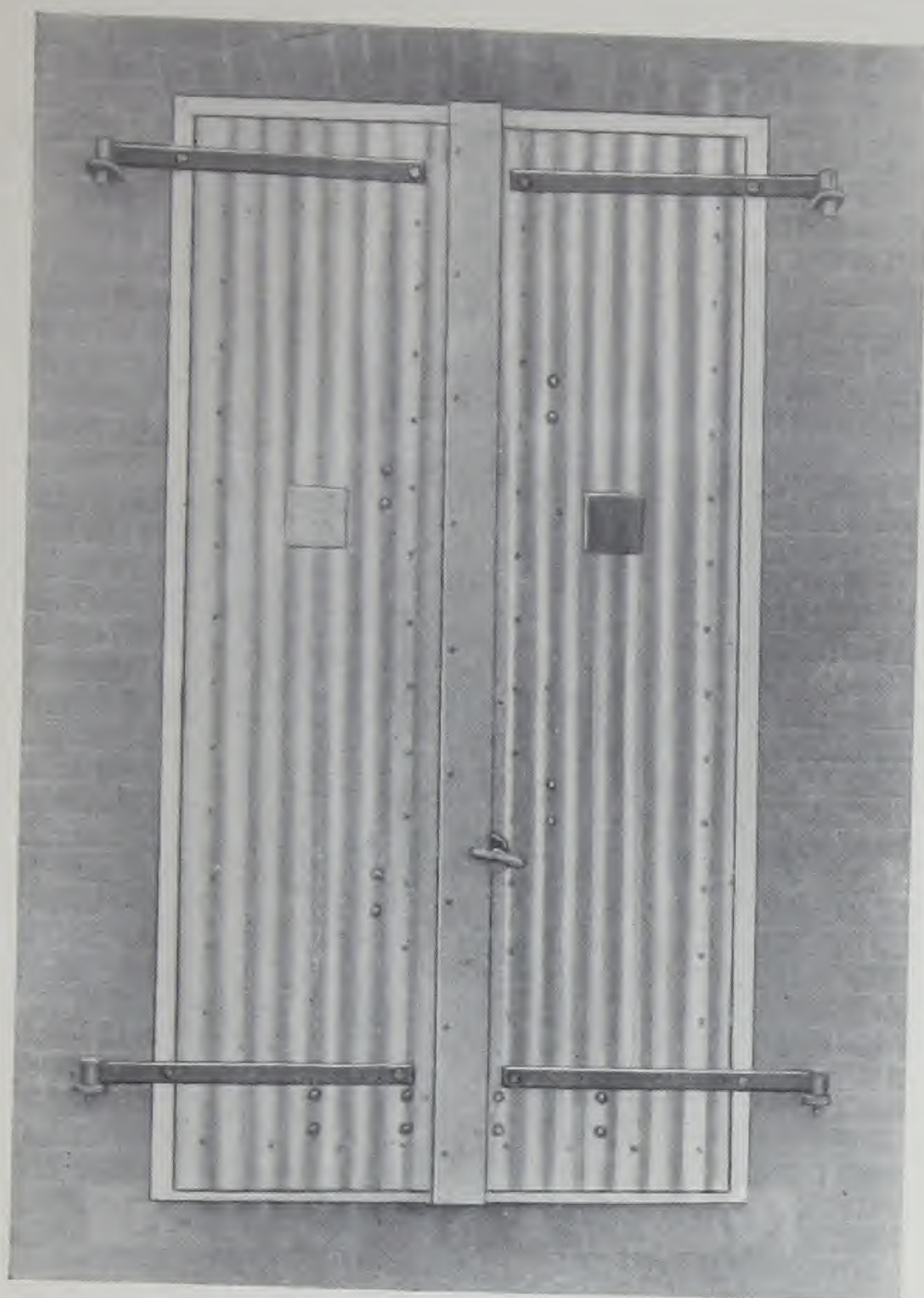


The four pictures on this page clearly illustrate some of the numerous defects of tin-clad fire doors. The upper left-hand view shows replacement of damaged tin at bottom of doors, by heavy steel plates. Upper right-hand picture shows heavy steel binder put on to repair damaged edge of door. Lower left-hand picture is a view of a non-standard tin-clad fire door that was completely destroyed by spontaneous internal combustion. Lower right-hand picture shows a long series of tin-clad doors. Note badly buckled appearance of envelope or tin covering on these doors.

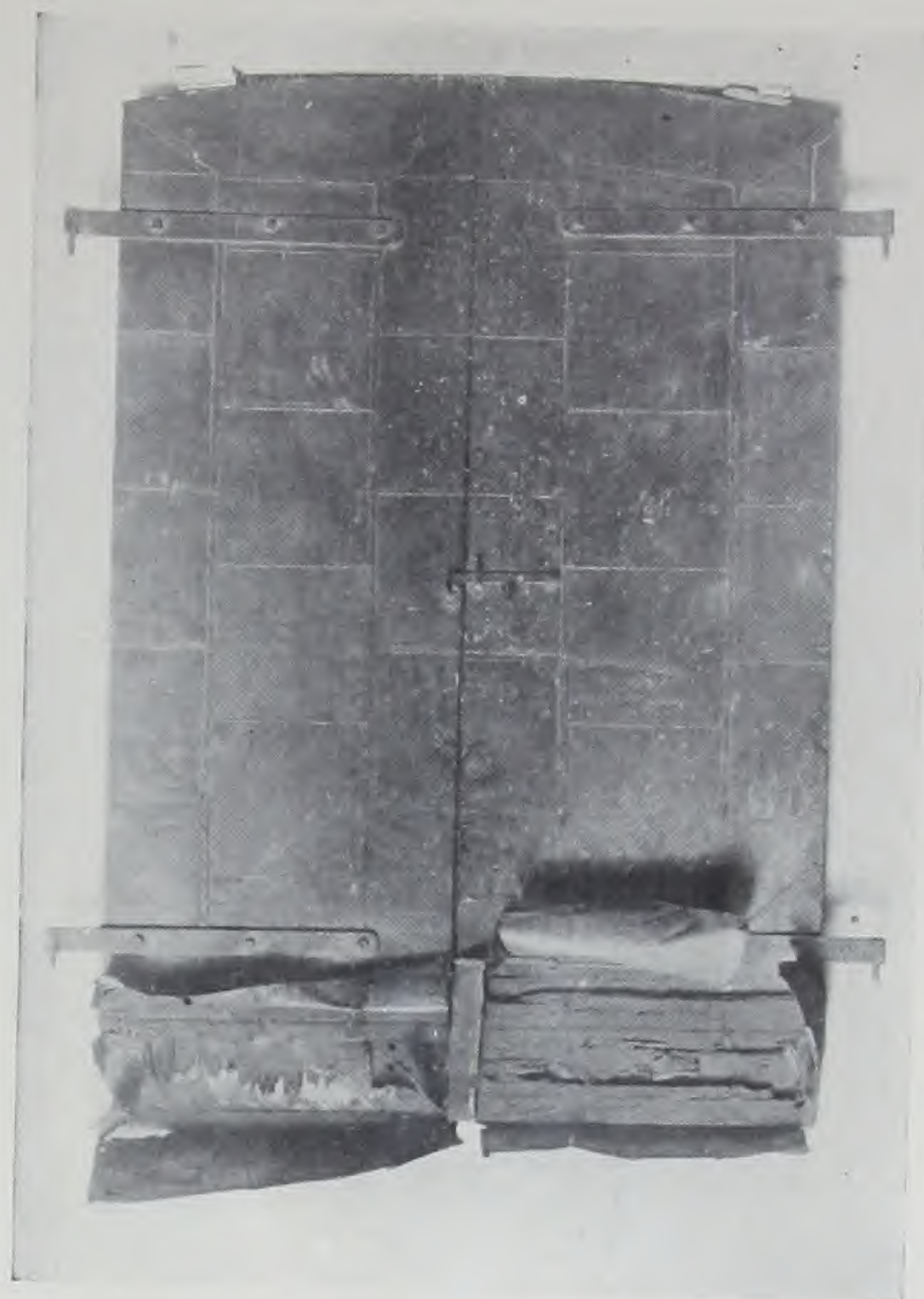
Don't make a mistake and buy *this* kind of door



NOTE.—Evans "Almetl" Doors do not rust and are indestructible in use!



Evans "Almetl" Double Swinging Fire Shutters in closed position. Note the Astragal strip in centre



View of a pair of Tin-Clad Fire Shutters that were badly affected by dry rot

Evans "Almetl" Fire Shutters

(Patent Pending)

Lightest and Best

The Evans "Almetl" Fire Shutters are fully approved by the Underwriters' Laboratories, Chicago, Ill., and the Factory Mutual Laboratories, Boston, Mass.

The construction of our Fire Shutters is designed along the lines of our Fire Doors, but they are not as wide along the edges as our doors, so as to make them suitable for the purpose intended. The reduction in width of frame lightens weight, but not strength.

In rigidity, strength, durability, ease of operation, simplicity of erection and minimum expense for maintenance, they are without an equal anywhere. We can supply fully approved hardware. Full insurance rebates are allowed for proper installation of these Shutters.

In making inquiries for Evans "Almetl" Fire Shutters, please observe in general the details that we ask for in respect to our Doors, and be sure to state whether the Shutters are for square or arch top openings, whether they are single or double, and whether flush or overlap type.

All buildings that can be reached by a fire from nearby or adjoining buildings should be equipped with our Evans "Almetl" Fire Shutters, as they constitute the best, and therefore the least expensive protection, that can be procured for the purpose.

NOTE.—Evans "Almetl" Shutters are rigid in plane—do not bend transversely and are indestructible in use.

SMALL, PARTIAL LIST OF CONCERNS NOW USING EVANS "ALMETL" FIRE DOORS (OR SHUTTERS) IN THEIR PROPERTIES

ARKANSAS

Kaucher Hodges & Co. Little Rock

COLORADO

Wm. Volker & Co. Denver
Colorado Tire & Rubber Co. Denver
La Junta Plumbing & Heating Co. La Junta
J. C. Robinson Seed Co. Rocky Ford
Charles Emerick Trinidad

CONNECTICUT

N. Y. New Haven & Hart. R. Co. Danbury
Hartford Electric Light Co. Hartford
Rockwell Drake Corporation Plainville
Souville Mfg. Co. Waterbury

DELAWARE

American Vulcanized Fibre Co. Newark
Kennard & Co. Wilmington

FLORIDA

H. N. Sells Jacksonville

GEORGIA

Duane Chale Co. Dalton

ILLINOIS

Joseph Knapp Belleville
Otto Elliott Cairo
Arnold Company Chicago
Western Electric Co. Chicago
John Ramcke & Son Chicago
George B. Swift & Co. Chicago
Hawke Compound Co. Chicago
Dryden Rubber Co. Chicago
Standard Paper Co. Chicago Heights
Wm. C. F. Kahse Muskegon
Naperville Lounge Co. Naperville
Illinois Central R. R. Co. Palestine
Peoria Milling Co. Peoria

INDIANA

Rubber Regenerating Co. Mishawaka
John Obrecht Sons Mfg. Co. Tell City
Tell City Desk Co. Tell City
Grassell Chemical Co. Terre Haute
Wm. H. Chere Mfg. Co. Washington

IOWA

Carstens Brothers Ackley
A. J. Bridges Bedford
J. J. Peterson Floyd
T. F. McDunnell & Co. Greene
Lauritzen Construction Co. Harleton
Ottumwa Supply & Construction Co. Leona
Iowa Hardware Mat. Ins. Bldg. Mason City
Theodore Stark & Co. New Hampton
G. L. Smith Shell Rock
John G. Miller Urbana
Hansen & Radley Waterloo
Overland Garage Co. Waterloo
Peterson Brothers, Mortuary Waterloo
Warburg Publishing Co. Waverly
Waverly Lumber Co. Waverly
G. L. Smith Winthrop

KANSAS

Exports Ice & Cold Storage Co. Emporia
E. T. Fay Hattie
Brownsd-Siffert Candy Co. Jola
Kaw Valley Cannery Co. Lawrence
Lawrence Paper Mfg. Co. Lawrence
R. L. Miller Mayette
J. W. Prince Parsons
Steel Fixture Mfg. Co. Topeka
J. H. Mitchell & Son Wellington
Western Iron & Foundry Co. Wichita

KENTUCKY

R. E. Campbell Arlington
Grain Elevator Co. Lexington
Lander Building Lexington
Lippitt & Meyers Tobacco Co. Lexington
L. W. Hancock Co. Louisville
J. M. Guthrie Scottsville

MARYLAND

Raich Monumental Co. Baltimore
Rough Chemical Co. Canton

MASSACHUSETTS

Arlington Mills Lawrence
Worcester Electric Light Co. Worcester

MICHIGAN

Detroit Ship Building Co. Detroit
Detroit United Railways Co. Detroit
Garfield Exchange Detroit
Great Lakes Engineering Co. Detroit
Hamlock Exchange Detroit
Michigan State Telephone Co. Detroit
Standard Brothers Detroit
Studebaker Automobile Corporation Detroit
W. E. Wood Co. Flint
Brown & Schlar Grand Rapids
Grand Rapids Railway Co. Grand Rapids
Imperial Furniture Co. Grand Rapids
Nichols & Co. Grand Rapids
Wilson-Wiggins Co. Grand Rapids
J. Harrison & Son Tonia

Capital Auto Co. Lansing
Capital State Bank Building Lansing
Wolverine Auto Co. Lansing

MINNESOTA

E. A. Siddall Wells
B. W. Lea Winona
New Winona Mfg. Co. Winona

MISSISSIPPI

Farmers' Warehouse Co. Oxford

MISSOURI

Ford Motor Co. Kansas City
Naloney Electric Co. St. Louis
International Shoe Co. St. Louis
Century Electric Co. St. Louis
Henry Millner St. Louis
Salline Electric Co. St. Louis
Theatre Building Springfield
Dr. J. A. Crockett Stanbury
Elk Hotel Building Trenton
Langston Mercantile Co. West Plains

NEBRASKA

G. O. Fairchild Bertrand
G. O. Rains Beatrice
Cushman Motor Works Lincoln
Lincoln Telephone & Telegraph Co. Lincoln
Holmes-Adkins Co. Omaha

NEW JERSEY

Parr & Bailey Mfg. Co. Camden
Strandwith & Scott Camden
American Can Co. Edgewater
Theodore F. Baulig Hammonton
Bound Brook Oil-Less Co. Lincoln
Millville Mfg. Co. Millville
Marden, Orth & Hastings Co. Newark
Thomas F. Farrell Newton
Botany Worsted Mills Passaic
A. C. Thompson Auto Co. Plainfield
Matthews Construction Co. Princeton
John A. Roebing's Sons Co. Trenton
Fitzgibbon & Crisp Co. Trenton

NEW MEXICO

Grass-Kelly Co. Albuquerque
Dubank & Dittrell Albuquerque

NEW YORK

Binghamton Lounge Co. Binghamton
E. B. Rich Binghamton
Kroehler Mfg. Co. Binghamton
National Aniline & Chemical Co. Brooklyn
American Mfg. Co. Brooklyn
National Cold Storage Co. Brooklyn
Seasey Brothers Brooklyn
Pratt & Leitchworth Co. Buffalo
Dolgerfelt Felt Shoe Co. Dolgeville
New York Central R. R. Co. Gardenville
Putnam Terminal High Bridge
Cushman Bakery Building New York City
Mt. Vernon Telephone Sta. New York City
Standard Paint Co. New York City
S. Rawlson Co. New York City
Certified Products Co. Niagara Falls
Allen-Hershel Co. No. Tonawanda
Overland Syracuse Co. Syracuse
Van Zandt, Jacobs & Co. Troy

NORTH CAROLINA

Va-Carolina Chemical Co. Charlotte
Kerr Bleaching & Finishing Co. Concord
Imperial Tobacco Co. Durham
Robeson Mfg. Co. Lumberton
Ledbetter Mfg. Co. Leash
R. C. Lindsey Co. Page
Paisa Cotton Mill Statesville

NORTH DAKOTA

Baldwin Flour Mill Casselton
Gladstone Milling Co. Gladstone

OHIO

The Firestone Tire & Rubber Co. Akron
B. F. Goodrich Co. Akron
Park School Cambridge
The Bussell Co. Canton
M. Schuchman & Sons Chillicothe
Central Annex School Cleveland
Ferre Concrete Construction Co. Cincinnati
Connell Leather Co. Cincinnati
Connell School Board Cincinnati
Cuba Block Cincinnati
Dicks-Pontius Building Dayton
Sam Asher & Brother Tulsa

OKLAHOMA

C. C. Van Tine Bartlesville
Cable Construction Co. Boynton
Manhattan Construction Co. Council Hill
Commencement Cotton Oil Co. Coaling
H. E. McCarty Durant
Griffin Grocery Co. McAlester
Emsell Hardware Co. McAlester
William Lowe Okmulgee

NEW JERSEY

Electrical Alloy Co. Marlboro

THE PANAMA CANAL

For the U. S. Army Ordnance Depot,
Colonel, Canal Zone

PENNSYLVANIA

Lehigh Portland Cement Co. Allentown
American Bronze Co. Berwyn
Barger, Baine & Mann, Inc. Bloomsburg
Standard Steel Works Co. Burnham
Weisenstein Brothers Butler
Charleroi Iron Works Charleroi
W. S. Barstow & Co. Easton
Pennsylvania Utilities Co. Easton
Asbestos Protected Metal Co. Economy
Acme Wagon Works Emigsville
Schuylkill Railway Co. Girardville
Pennsylvania R. R. Co. Harrisburg
Henry Mininger Hatfield
The Hamilton Watch Co. Lancaster
Krupp Foundry Co. Lansdale
Atlantic Refining Co. Philadelphia
Harrison Brothers & Co. Philadelphia
McCaffrey Pipe Co. Philadelphia
Edward C. Budd Mfg. Co. Philadelphia
Jessey & Moore Paper Co. Philadelphia
Keystone Spinning Mills Philadelphia
Northern Liberties Gas Co. Philadelphia
Northeast Stor. Warehouse Co. Philadelphia
Phila. & Reading R. Co. Philadelphia
H. C. Rea Building Philadelphia
Roberts & Mander Stone Co. Philadelphia
Schaum & Uhlinger Co. Philadelphia
Sun Shipbuilding Co. Philadelphia
Taubel Brothers Philadelphia
The Bell Co. Warehouse Philadelphia
D. B. Martin Co. Philadelphia
Manufacturing Co. of America Philadelphia
Henry F. Mitchell Co. Philadelphia
India Refining Co. Philadelphia
Concrete Construction Co. Philadelphia
Pennsylvania Railroad Co. Philadelphia
Barrett Mfg. Co. Philadelphia
Frankford, Tacony & Holmesburg R. Co. Philadelphia
John Wanamaker Philadelphia
Floyd Wells Co. Royersford
Susquehanna Silk Mills Sunbury
I. H. Glimmer & Co. Tacony
F. D. Beyer & Co. Tyrone
Uniontown Hospital Uniontown

SOUTH CAROLINA

Cotton Oil Co. Bamberg
The Watermill Co. Camden
Va-Carolina Chemical Co. Charleston
Gallivan Building Co. Columbia
Addison Mills Edgefield
Winestore Mills Winestore

TENNESSEE

Harlan-Morris Mfg. Co. Jackson
Kaucher, Hodges & Co. Memphis
Orgill Brothers Co. Memphis
Patterson Transfer Co. Memphis
Valley Cotton Oil Co. Memphis
Memphis Motor Co. Memphis
Memphis Terminal Corporation Memphis

TEXAS

Overland Texas Company Amarillo
J. W. Singleton Amarillo
City of Arkansas Pass Arkansas Pass
Brydson Brothers Austin
H. C. Hellmuth Belleville
H. T. Pensford & Sons El Paso
City of Hearne Hearne
Municipal Warehouse Houston
Lockhart Oil & Gas Co. Lockhart
Lana Cotton Oil Co. New Braunfels
M. F. Kelley Paris
Paris Building & Supply Co. Paris
Cameroon Water Pwr. & Lt. Co. San Antonio
Firestone Building San Antonio
City & County Hospital San Antonio

VIRGINIA

John H. Heald & Co. Bradford
Kiverside Cotton Mills Danville
Camden Cotton Mills Drake Branch
Norfolk Warehouse Corporation Norfolk
British-American Tobacco Co. Richmond
Kling & Co. Richmond
Export-Lest Tobacco Co. Richmond
W. S. Ragland Richmond
Va-Carolina Chemical Co. Richmond

WEST VIRGINIA

Interwest Mills Martinsburg
Globe Automatic Sprinkler Co. Warwood
Bell Telephone Co. Wheeling
Central District Telephone Co. Wheeling

WISCONSIN

Food du Lac Church Fur Co. Food du Lac

WYOMING

Sherridan Iron Works Sherridan

Insist on Evans "Almetl" — join this list of satisfied users.

"Star" Ventilators

(Patented)



are extensively used on many of the most notable buildings in America, while the other Merchant & Evans Co. specialties, briefly described on the following pages—High Grade Roofing Plates, Metal Spanish Tiles, and Metal Gothic Shingles—are al-

most as well known.

The U. S. Government adopted the Star Ventilator as a War Standard on account of its simplicity of construction and high efficiency after thorough competitive tests.

Partial List of very prominent users of "Star" Ventilators:

National Steel Car Co., Hamilton, Can.
Berlin Construction Co., Berlin, Conn.
American Brass Co., Torrington, Conn.
E. I. DuPont de Nemours Powder Co., Wilmington, Del.
Southern Railway Co., Washington, D. C.
U. S. Government, practically all Departments.
Armour & Co., Chicago, Ill.
Chicago & Northwestern R. R. Co., Chicago.
Cudahy Packing Co., Chicago, Ill.
Fairbanks, Morse & Co., Chicago, Ill.
Marshall Field & Co., Chicago, Ill.
Gulf, Colorado & Santa Fe R. Co., Chicago.
Texas Co., Chicago, Ill.
Pere Marquette R. R. Co., Detroit, Mich.
Buhl Sons & Co., Detroit, Mich.

Crane Co., St. Louis, Mo.
Illinois Steel Co., Chicago, Ill.
John A. Roebling's Sons Co., Trenton, N. J.
Lackawanna Steel Co., Buffalo, N. Y.
American Bridge Co., New York.
British American Tobacco Co., New York.
Lehigh Valley R. R. Co., New York.
New Jersey Zinc Co., New York.
Newport News Ship Building & Dry Dock Co., New York.
New York Central R. R. Co., New York.
Old Dominion Steamship Co., New York.
Tidewater Oil Co., New York.
American Locomotive Co., Schenectady, N. Y.
General Electric Co., New York.
Utica State Hospital, Utica, N. Y.
La Belle Iron Works, Steubenville, Ohio.

American Car & Foundry Co., Berwick, Pa.
Lehigh Coal & Navigation Co., Philadelphia.
Pennsylvania R. R. Co., Philadelphia.
Philadelphia & Reading R. R. Co., Phila.
American Sheet & Tin Plate Co., Pittsburg.
Carnegie Steel Co., Pittsburg, Pa.
Delaware, Lackawanna & Western R. R. Co., Plymouth, Pa.
Swarthmore College, Swarthmore, Pa.
Hampton Normal & Agricultural Institute, Hampton, Va.
Seaboard Air Line Co., Norfolk, Va.
Virginia R. R. Co., Norfolk, Va.
Imperial Tobacco Co., Richmond, Va.
Virginia-Carolina Chemical Co., Richmond.
Norfolk & Western R. R. Co., Roanoke, Va.
Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.

WE CLAIM

"STAR" Ventilators will give MORE CUBIC FEET air exhaust capacity per DOLLAR INVESTED, under like conditions of service and of equal construction strength, THAN ANY OTHER MAKE OF VENTILATOR.

THE REASONS

There are many reasons for "Star" dominance in the Ventilator field.

First—"Star" Ventilators give maximum exhaust—viz., more cubic feet air exhaust capacity per dollar invested than any other Ventilator. They keep the air in motion, exhausting and expelling impure air and circulating the fresh air which replaces it.

Second—There is no possibility of down draughts with the "Star."

Third—The "Star" is storm proof.

Fourth—The "Star" is more pleasing in design than any other ventilator.

Fifth—The "Star" is more durable.

Sixth—The "Star" Fire Retarding Ventilators contain within themselves dampers held open against gravity by a chain with a fusible link. In case of fire, dampers automatically close, cutting off the exhaust, hence are a recognized medium of safety in event of internal combustion, constituting in fact a series of safety valves. After the fire is extinguished the chain device permits the ventilators to be readily opened, thus clearing the building of smoke, gases, etc.

Seventh—The "Star" Fire Retarding Skylight Ventilator distributes light through a section made up of heavy wired glass.



Woolworth Building, New York
"Star" Equipped



Municipal Building, New York
"Star" Equipped

Efficient Ventilation



PLATTSBURGH BARRACKS, N. Y.

Efficient ventilation is secured through the installation of a ventilator, the cost and maintenance charges of which are in direct proportion to the amount of exhaust obtainable.

The improved "Star" Ventilators have been designed with this basic principle in mind. They are therefore the simplest, most compact and most efficient ventilators in design, compared with cost, in the market—the cheapest investment in ventilation procurable in the country.

To other ventilators have been added complex and expensive improvements. They have been mounted on higher bases so as to give greater access to outer air currents, but the increase in exhaust power has not kept pace with the increase in cost.

By adhering strictly to the simplicity of our design and using a ventilator of larger size where an increased exhaust power is demanded, we are able to keep the cost per foot of exhaust at the minimum rate, which is lower than that of any ventilator of similar or more complex design, on the market.

Our facilities for the production and marketing of our improved "Star" Ventilators were never better. We are prepared to solve the most difficult problems of ventilation with the best designed ventilator on the market.

WE CLAIM

"STAR" Ventilators will give MORE CUBIC FEET air exhaust capacity per DOLLAR INVESTED, under like conditions of service and of equal construction strength, THAN ANY OTHER MAKE OF VENTILATOR.

Pointers on Good Ventilation

The purpose of ventilation is to exhaust vitiated or foul air from an enclosed area and admit fresh, pure air to replace it. "Star" Ventilators exhaust foul air without possibility of down draught.

Fuel is saved by such proper ventilation, and efficiency of the work force assured.

Modern ventilation practice is based on a minimum supply of 30 cubic feet of air per minute per person in area to be ventilated.

NOTE.—Static ventilators (like these) should always be of largest diameter buyer can afford and install, because when air is still (as occurs most of the time) the larger the roof opening the better the ventilation. Always buy largest diameter vent of sound design procurable for same investment.



"STAR" VENTILATORS ON PITTSBURGH SCREW AND BOLT CO. BUILDING, PITTSBURGH, PA.



"STAR" VENTILATORS ON THE U. S. WAR TRADE BOARD BUILDING, WASHINGTON, D. C.

The following schedule of air supply per hour per person is practical under ordinary conditions:

	Cu. Ft. per Hour
Hospitals	3600 per Bed
Legislative Assembly Halls ..	3600 " Seat
Barracks, Bedrooms and Work-shops	3600 " Person
Schools and Churches	2400 " "
Theatres and Ordinary Halls of Audience	2400 " Seat
Office Rooms	1800 " Person
Dining Rooms	1800 " "

Above does not apply to all cases, but is a good, practical working basis.



TABLE OF SIZES

Galvanized Standard "Star" Ventilators

Size	Gauge Steel	Net Wt. Pounds
3 inch	26	$\frac{5}{8}$
4 "	26	1
5 "	26	$1\frac{1}{2}$
6 "	26	$2\frac{1}{4}$
7 "	26	3
8 "	26	$4\frac{1}{2}$
9 "	26	5
10 "	26	$6\frac{3}{4}$
12 "	24	11
14 "	24	14
16 "	24	20
18 "	22	$27\frac{1}{2}$
20 "	22	34
22 "	22	36
24 "	22	44
28 "	20	69
30 "	20	84
36 "	20	117
40 "	20	145
42 "	20	150
48 "	20	200
54 "	18	288
60 "	18	355
72 "	18	570
84 "	18	828
96 "	18	924

Net prices sent upon application to any office of the Company.

Ventilators of stock sizes above or of special designs, made in Galvanized Steel, Copper or other metals specified by purchasers.



"Star" Ventilators on the U. S. Food Administration Bldg., Washington, D. C.

Types of "Star" Ventilators

The four standard types of "Star" Ventilators are:

1. Standard "Star" Ventilator.
2. Fire Retarding "Star" Ventilator.
3. Skylight "Star" Ventilator.
4. Fire Retarding Skylight "Star" Ventilator.

These Ventilators are usually made from galvanized steel or iron, and from copper.

In connection with the Ventilator we can furnish the following:

1. Regulation bases for any roof—to fit chimneys, etc.
2. Special bases for peculiar conditions, of any design desired.
3. Flat disc dampers to fit any base, hand-controlled by chain through opening.

Important.—We strongly recommend that "Star" Ventilators be located at least 30 inches above ridge or slope of roof. Best results are obtained by locating Ventilator at highest possible point above the ridge.

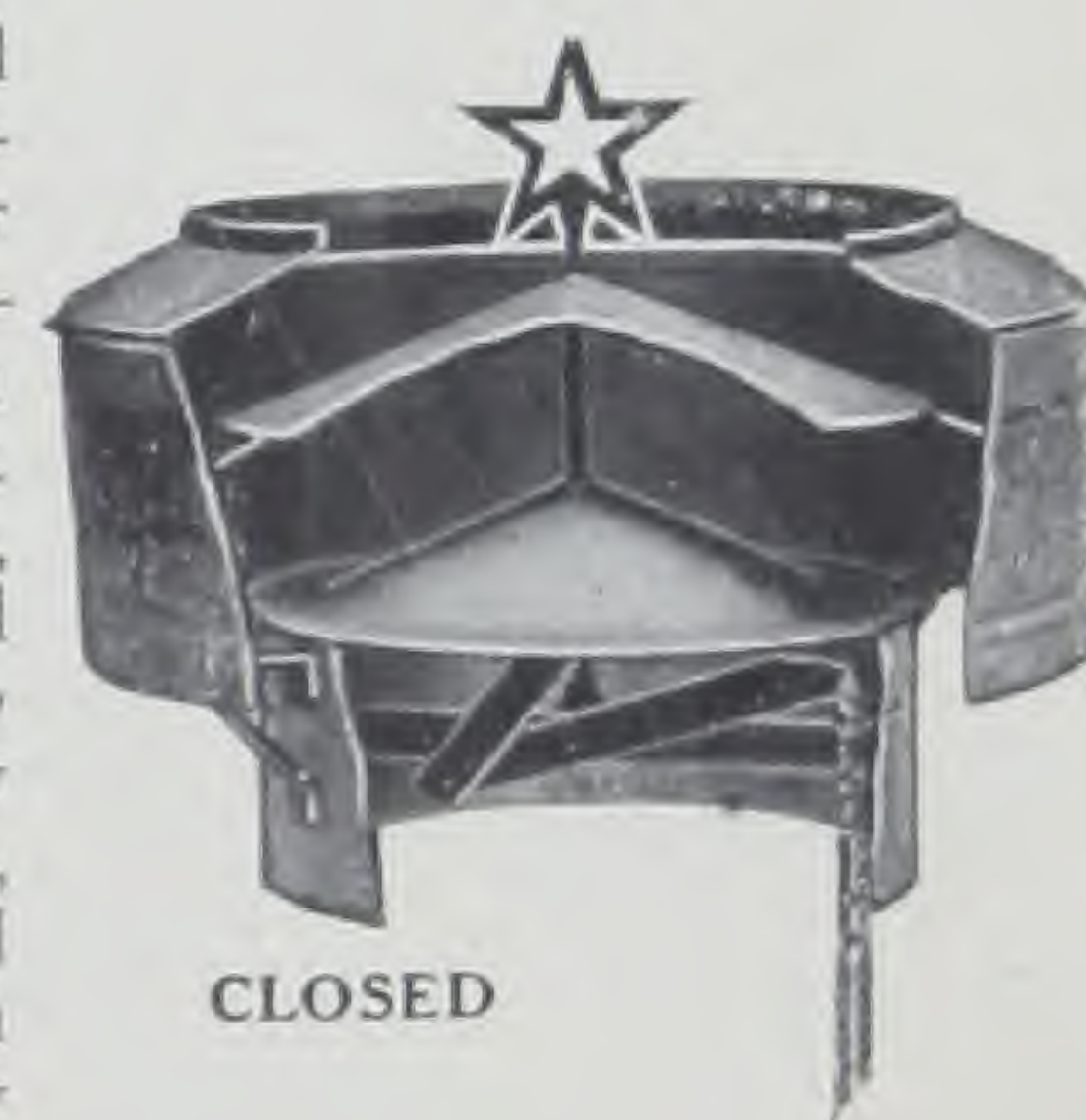
Fire Retarding "Star" Ventilator

With Patented Gravity Damper



OPEN

The vertical slide Damper operates by lever movement, controlled by chain with fusible link. In case of fire, link parts and damper drops to closed position by force of gravity, cutting off all draft. Damper can be regulated by disengaging chain from control hook.



CLOSED

Fire Retarding Skylight "Star" Ventilator

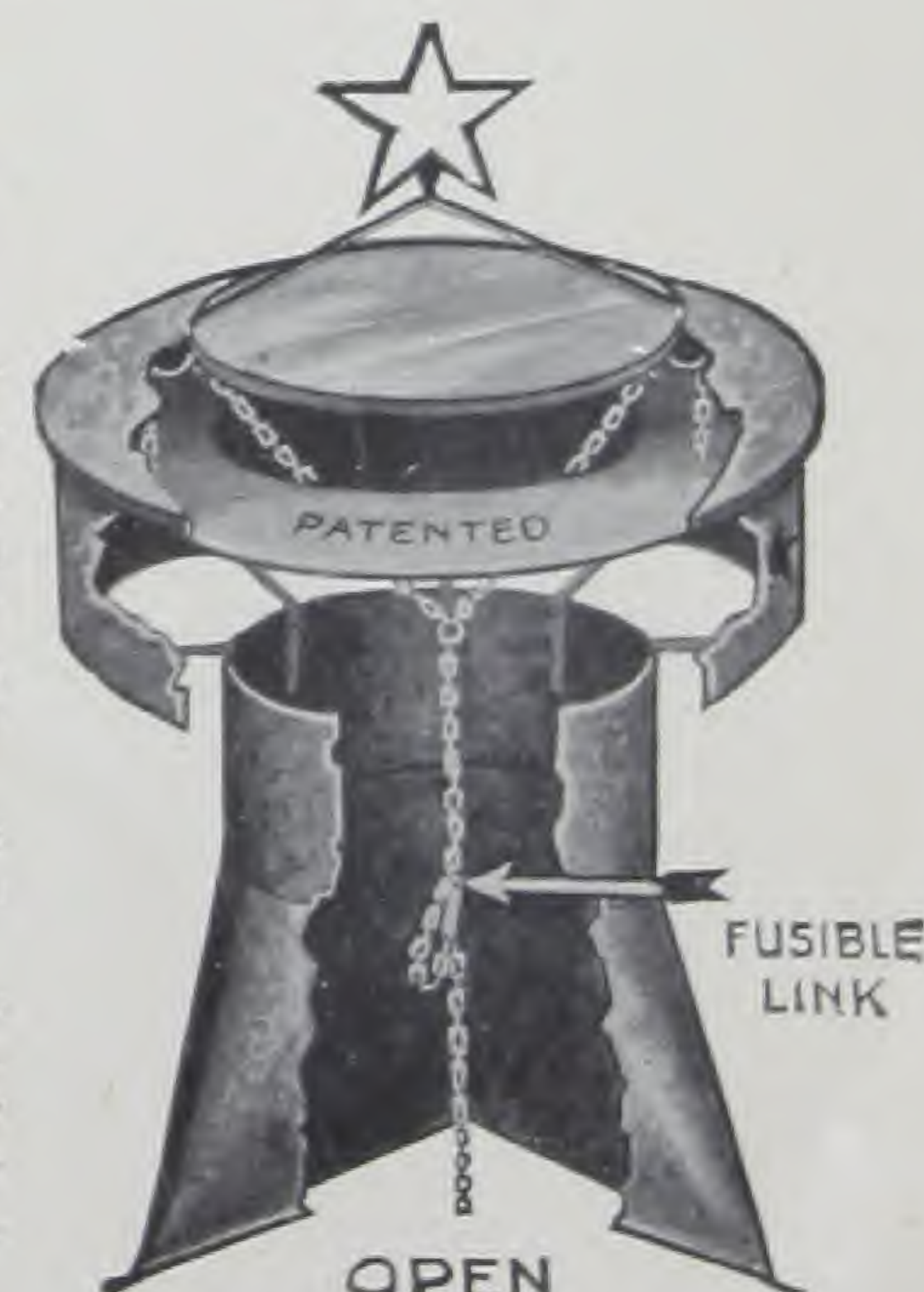
(Patented)

This device is recognized as a superior Skylight and Ventilator. It is absolutely weather proof with ample exhaust capacity.

This Skylight Model, provided with a movable Valve or Damper, is controlled by chain with a Fusible Link. In case of fire, the link parts and the Damper drops by gravity.

The movable Valve or Damper in this type can be changed, at will, from an open to a closed position, or vice versa.

Notice.—The above types of Ventilators and Dampers are protected in certain features by patents, and by our universally well-known, distinctive trade-mark, and by the "Star" appearing on top of the Ventilator.



OPEN

FUSIBLE LINK



Standard "Star" Ventilator, with Base

"Merchant's Old Method" ROOFING TIN

has been the accepted standard quality roofing plate for the last quarter of a century.

When properly applied, it makes a roof that is light, clean, sanitary and a thorough protection from fire, lightning and storm.

Copper Bearing Base
Very Heavy Coating **Palm Oil Process**



STATE CAPITOL, RICHMOND, VA., COVERED WITH 10,000 SQ. FT. "MERCHANT'S OLD METHOD."



NATIONAL SOLDIERS' HOME (VA.), COVERED WITH 6,500 SQ. FT. "MERCHANT'S OLD METHOD."

As compared with Wooden Shingles and Composition or Slag and Gravel Roofing, Tin Roofs are superior for the following reasons:

Fire Resisting
Salvage
Appearance
Durable
Adaptable
Minimum Weight
Flexible

Low First Cost
Sanitary
Weather Proof
Lightning Proof
Low Insurance
Minimum Cost of Maintenance

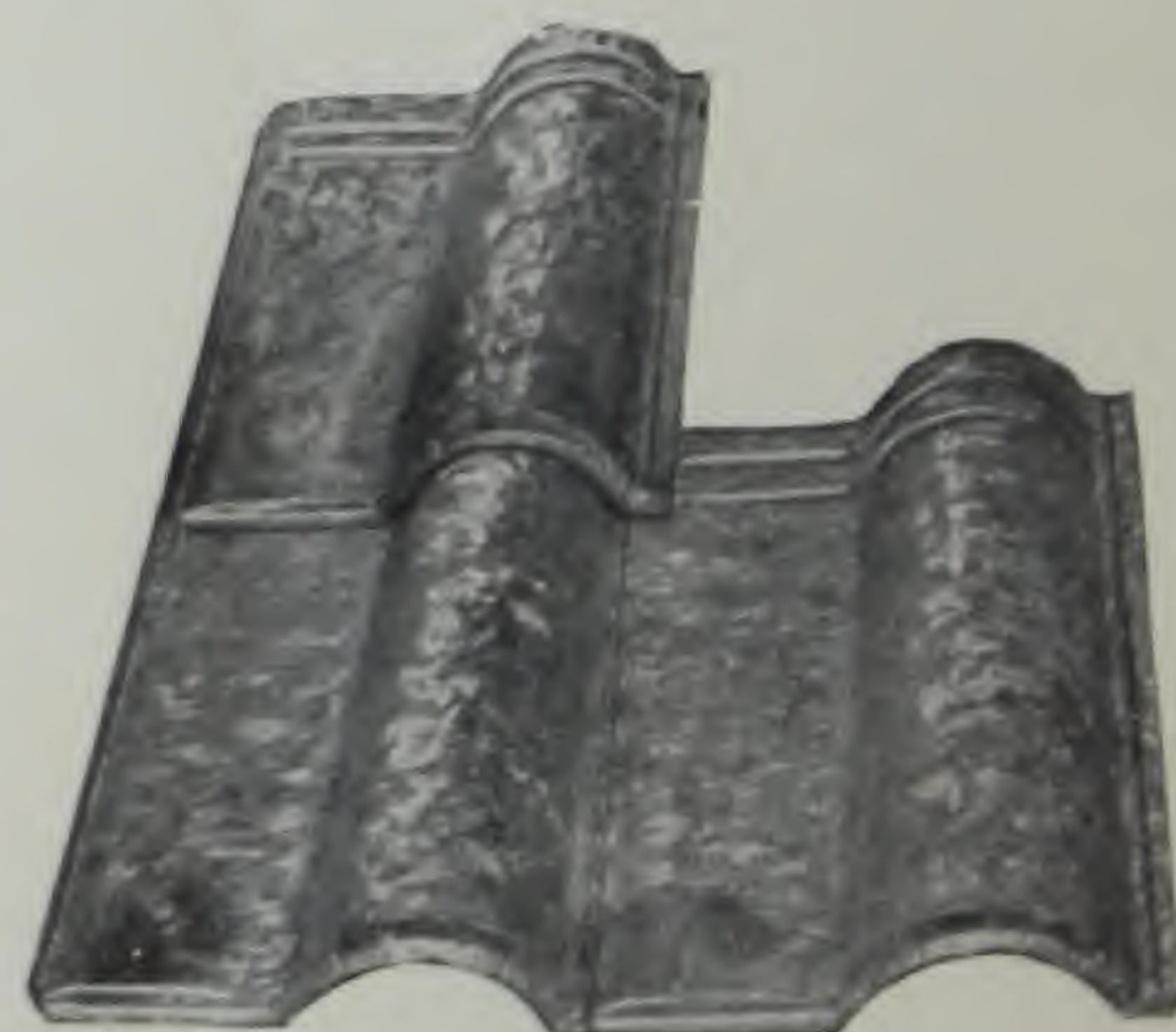
Merchant's Metal Spanish Tiles

when properly applied, make a storm-proof, ornamental, fire-resisting roof. The fact that millions of square feet of these Tiles have been sold and that universal satisfaction has been given wherever they have been used is an indication of their merit and worth as roofing material.

Merchant's "Gothic" Shingles



SHOWING APPLICATION OF "GOTHIC" SHINGLES.



SHOWING APPLICATION OF "SPANISH" TILES.

Offer full protection against fire and storm. They are especially designed for churches, residences and other buildings where a roof of moderate price and distinctive appearance is desired. They can be applied more readily than any other form of metal roofing.

We will gladly send samples and prices upon request.

EVANS "ALMETL" FIRE DOORS & SHUTTERS

AND THE FAMOUS

"STAR" VENTILATORS



POWELL EVANS, PRESIDENT.

MERCHANT & EVANS Co

NEW YORK

BALTIMORE

ATLANTA

CLEVELAND



WHEELING

CHICAGO

ST. LOUIS

KANSAS CITY